HBM 2011 Québec City, Canada

17th Annual Meeting
of the Organization on Human Brain Mapping

Centre des Congrès de Québec
June 26-30, 2011

»abstracts

Organization for
Human Brain Mapping

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»poster key

Organization for Human Brain Mapping

All posters will be displayed for 2 days, either Monday/Tuesday or Wednesday/Thursday.

For Monday and Tuesday posters, even numbered posters will stand-by on Monday, June 27 and odd numbered posters will stand-by on Tuesday, June 28.

For Wednesday and Thursday posters, even numbered posters will stand-by on Wednesday, June 29 and odd numbered posters will stand-by on Thursday, June 30.

Daily Poster Stand-By Session Times:
Monday, June 27: 13:00 – 15:30 (even numbers)
Tuesday, June 28: 13:15 – 15:45 (odd numbers)
Wednesday, June 29: 13:15 – 15:45 (even numbers)
Thursday, June 30: 10:30 – 13:00 (odd numbers)

All Monday and Tuesday presenters are invited to attend a poster reception on Tuesday evening from 18:00 – 19:30. All Wednesday and Thursday presenters are invited to attend a poster reception on Thursday evening from 17:00 – 18:30.

Monday and Tuesday Posters

CATEGORY/SUB-CATEGORY	POSTER NUMBERS
Brain Stimulation Methods	
Deep Brain Stimulation	1-6
Direct Electrical/Optogenetic Stimulation	7-8
TDCS	9-14
TMS	15-33
Disorders of the Nervous System	
Alzheimer's Disease and Other Dementias	34-96
Autism	97-127
Developmental Disorders	128-173
Epilepsy	174-219
Mood and Anxiety Disorders	220-296
Traumatic Brain Injury	297-318
Emotion and Motivation	
Reward and Punishment	319-353
Sexual Behavior	354-356
Higher Cognitive Functions	
Executive Function	357-413
Imagery	414-429
Music	430-443
Imaging Methods	
Anatomical MRI	444-471
BOLD fMRI	472-554
Diffusion MRI	555-607
Non-BOLD fMRI	608-614

CATEGORY/SUB-CATEGORY	POSTER NUMBERS
Modeling and Analysis Methods	
Image Registration and Computational Anatomy	615-636
Motion Correction and Preprocessing	637-645
Multivariate Modeling	646-668
PET Modeling and Analysis	669-670
Segmentation and Parcellation	671-699
Task-Independent and Resting-State Analysis	700-759
Univariate Modeling	760-767
Other Methods	768-797
Language	
Language Acquisition	798-804
Language Comprehension and Semantics	805-840
Learning and Memory	
Implicit Memory	841-842
Long-Term Memory (Episodic and Semantic)	843-863
Neural Plasticity and Recovery of Function	864-874
Lifespan Development	
Aging	875-923
Neuroanatomy	
Anatomy and Function	924-944
White Matter Anatomy, Fiber Pathways and Connectivity	945-983
Perception and Attention	
Attention: Auditory/Tactile/Motor	984-989
Attention: Visual	990-1013
Chemical Senses: Olfaction, Taste	1014-1015
Consciousness and Awareness	1016-1028
Sleep and Wakefulness	1029-1038

CATEGORY/SUB-CATEGORY	POSTER NUMBERS
Physiology, Metabolism and Neurotransmission	
Cerebral Metabolism and Hemodynamics	1039-1046
Neurophysiology of Imaging Signals	1047-1052
Pharmacology and Neurotransmission	1053-1059

CATEGORY/SUB-CATEGORY	POSTER NUMBERS
Social Neuroscience	
Self Processes	1060-1069
Social Cognition	1070-1099
Social Interaction	1100-1117

Wednesday and Thursday Posters

CATEGORY/SUB-CATEGORY	POSTER NUMBERS
Disorders of the Nervous System	
Addictions	1-29
Obsessive-Compulsive Disorder and Tourette Syndrome	30-42
Parkinson's Disease and Movement Disorders	43-77
Schizophrenia and Psychotic Disorders	78-153
Sleep Disorders	154-158
Stroke	159-183
Other Disorders	184-226
Emotion and Motivation	
Emotional Learning	227-235
Emotional Perception	236-293
Genetics	
Genetic Association Studies	294-313
Genetic Modeling and Analysis Methods	314-325
Neurogenetic Syndromes	326-334
Informatics	
Atlases	335-340
Databasing and Data Sharing	341-358
Pipelines	359-365
Higher Cognitive Functions	
Decision Making	366-402
Reasoning and Problem Solving	403-411
Space, Time and Number Coding	412-423
Imaging Methods	
EEG	424-444
MEG	445-461
MR Spectroscopy	462-467
Multi-Modal Imaging	468-499
Optical Imaging/NIRS	500-532
PET	533-537

CATEGORY/SUB-CATEGORY	POSTER NUMBERS
Modeling and Analysis Methods	
Bayesian Modeling	538-544
Classification and Predictive Modeling	545-592
Diffusion MRI Modeling and Analysis	593-624, 645
EEG/MEG Modeling and Analysis	625-665
Exploratory Modeling and Artifact Removal	666-677
fMRI Connectivity and Network Modeling	678-774
Segmentation and Parcellation	601
Language	
Reading and Writing	775-792
Speech Perception	793-815
Speech Production	816-828
Learning and Memory	
Skill Learning	829-841
Working Memory	842-862
Lifespan Development	
Normal Brain Development: Fetus to Adolescence	863-898
Motor Behavior	
Basal Ganglia/Brainstem/ Spinal Cord Function	899-900
Brain-Machine Interface	901-910
Cerebellar Function	911-913
Eye Movements/ Visuomotor System Function	914-918
Motor-Premotor Cortical Functions	919-952
Neuroanatomy	
Brain Networks	953-981, 1115
Cortical Anatomy and Segregation	982-993
Subcortical Structures	994-1003
Perception and Attention	
Perception: Auditory/ Vestibular	1004-1020
Perception: Multisensory and Crossmodal	1021-1038
Perception: Pain and Visceral	1039-1067
Perception: Tactile/Somatosensory	1068-1081
Perception: Visual	1082-1114

Schedule of Poster Presentations

Monday, June 27, 2011 and Tuesday, June 28, 2011

** Indicates poster will also be presented during an Oral Session. The Oral Session number is indicated in parantheses after the poster title.*

*** Indicates poster will also be presented as an I-Poster. Please check the Program Book for I-Poster presentation times.*

Information listed, including author affiliations, appear as submitted.

>> Monday, June 27: 13:00 – 15:30 (even numbers)
>> Tuesday, June 28: 13:15 – 15:45 (odd numbers)

Brain Stimulation

Deep Brain Stimulation

1 High Frequency Oscillations - a Neurophysiological Marker of the Motor State in Parkinson's Disease
Markus Butz[1,2], Tolga Özkurt[1], Melanie Homburger[1], Saskia Elben[1], Jan Vesper[3], Lars Wojtecki[1], Alfons Schnitzler[1]
[1]Institute of Clinical Neuroscience and Medical Psychology, Heinrich-Heine-University, Düsseldorf, Germany, [2]Institute of Neurology, University College London, London, United Kingdom, [3]Department of Neurosurgery, Heinrich-Heine-University, Düsseldorf, Germany

2 Clinical efficacy of subthalamic stimulation for Parkinson's disease : location of electrodes
NEUVILLE Jérôme[1,2,3], BREFEL-COURBON Christine[4], ARBUS Christophe[5], MOYSE Emmanuel[4], ORY Fabienne[4], BERRY Isabelle[4], LOTTERIE Jean-Albert[4], SIMONETTA-MOREAU Marion[4], CHAYNES Patrick[4]
[1]CHU Toulouse Pôle Neurosciences, Toulouse, France, [2]Université Paul Sabatier, Toulouse, France, [3]LERISM, Toulouse, France, [4]CHU Toulouse, Pôle neurosciences, Toulouse, France, [5]CHU Toulouse, Service psychiatrie, Toulouse, France

3 Abnormalities of Thalamic Anatomy in Pain: Implications for Deep Brain Stimulation Surgery
Patrick Schweder[1], Alexander Green[2], Peter Hansen[3], Liz Moir[2], Tipu Aziz[2]
[1]University Of Oxford, Department Of Neurosurgery, Oxford, United Kingdom, [2]University of Oxford, Department of Neurosurgery, Oxford, United Kingdom, [3]University of Oxford, Department of Physiology, Anatomy and Genetics, Oxford, United Kingdom

4 An Anatomical and Diffusion Analysis of the Nucleus Accumbens
Patrick Schweder[1], Sameer Sheth[2], Peter Hansen[3], Alexander Green[4], Tipu Aziz[4]
[1]University Of Oxford, Department Of Neurosurgery, United Kingdom, [2]Massachusetts General Hospital, Chestnut Hill, MA, [3]University of Oxford, Department of Physiology, Anatomy and Genetics, Oxford, United Kingdom, [4]University of Oxford, Department of Neurosurgery, Oxford, United Kingdom

5 The role of connectivity to motor networks in successful VIM stimulation
Johannes Klein[1], Michael Barbe[2], Carola Oberschmidt[1], Simon Baudrexel[1], Lutz Weise[1], Matthias Runge[2], Mohammad Maarouf[2], Thomas Gasser[3], Lars Timmermann[2], Rüdiger Hilker[1]
[1]Goethe-University of Frankfurt, Frankfurt, Germany, [2]University of Cologne, Cologne, Germany, [3]University Hospital Essen, Essen, Germany

6 Synchronization of multiple chaotic FitzHugh-Nagumo neurons under external electric stimulation
Muhammad Rehan[1], Keum-Shik Hong[1]
[1]Pusan National University, Busan, Korea, Republic of

Brain Stimulation

Direct Electrical/Optogenetic Stimulation

7 MRI-based Finite Element Modeling of Transcranial Electrical Stimulation
Michael Russell[1], Bennett Groshong[2], David Wiley[3]
[1]Aaken Laboratories, [2]Aaken Laboratories, Davis, CA, [3]Stratovan Corp., Woodland, CA

8 Successful simultaneous four-point cortical stimulation monitoring in a hemiparetic patient
Yoshinobu Kamio[1], Hiroaki Kenmochi[1], Hirokazu Nakatogawa[1], Ayataka Fujimoto[1], Chikanori Inenaga[1], Takamichi Yamamoto[1], Tsuneo Sakai[1], Hiroki Namba[2], Tokutaro Tanaka[1]
[1]Seirei Hamamatsu General Hospital, Hamamatsu, Shizuoka, Japan, [2]Hamamatsu University School of Medicine, Hamamatsu, Shizuoka, Japan

Brain Stimulation

TDCS

9 Modulation the Cortical Activity by Prefrontal tDCS in Patients with Stroke
Yun-Hee Kim[1], Won Hyuk Chang[2], Ji Sung Yoo[2], Ah-Hee Lee[2], Ji-Young Park[2], Alvaro Pascual-Leone[3]
[1]Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Rep. of Korea, [2]Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of, [3]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

10 Structural Differences in BA6 Account for Variability of Cerebellar TDCS Effects on Working Memory
Andreas Boehringer[1], Katja Macher[1], Juergen Dukart[1], Arno Villringer[1,2,3], Burkhard Pleger[4,2,3]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Berlin School of Mind&Brain, Berlin, Germany, [3]Dept of Cognitive Neurology, University Hospital Leipzig, Leipzig, Germany, [4]Max-Planck-Institute for Human Cognitive and Brain Science, Leipzig, Germany

11 Can fMRI be useful to detect changes induced by tDCS in a case of obsessive compulsive disorder?
Chiara Volpato[1], Francesco Piccione[1], Marianna Cavinato[1], Davide Duzzi[2], Luciano Foscolo[1], Annalena Venneri[3,1]
[1]IRCCS San Camillo, Venice, Italy, [2]University of Modena and Reggio Emilia, Modena, Italy, [3]University of Hull, Hull, United Kingdom

12 Anterograde diffusivity changes in corticospinal tracts of stroke patients undergoing tDCS
Robert Lindenberg[1], Felix Betzler[1], Lin Zhu[1], Gottfried Schlaug[1]
[1]BIDMC / Harvard Medical School, Boston, MA

13 Effective connectivity estimation from somatosensory MEG data: a study of the tDCS effect
Sergey Plis[1]
[1]The Mind Research Network

14 Effects of tDCS on behaviour and electrophysiology of lanuage production
Miranka Wirth[1], Thomas Dierks[2], Helge Horn[2], Janina Kuenecke[3], Rasha Abdel Rahman[3], Werner Sommer[3], Thomas Koenig[4]
[1]University of California, Berkeley, CA, [2]Department of Psychiatric Neurophysiology, Bern, Switzerland, [3]Humboldt University, Berlin, Germany, [4]Department of Psychiatric Neurophysiology, University Hospital of Psychiatry, Bern, Switzerland

Brain Stimulation

TMS

15 ** **Baboon Validations of the Cortical Column Cosine Aiming Model of TMS Induced Brain Activations**
Felipe Salinas[1], Shalini Narayana[1], Wei Zhang[1], Lisa Jones[2], M. Michelle Leland[2], Jack Lancaster[1], Peter Fox[1]
[1]Research Imaging Institute, UTHSCSA, San Antonio, TX, United States, [2]Dept. Lab Animal Resources, UTHSCSA, San Antonio, TX, United States

16 ** **FMRI and Concurrent Paired Pulse TMS at M1**
Carsten Schmidt-Samoa[1], Juergen Baudewig[2], Peter Dechent[1]
[1]MR-Research in Neurology and Psychiatry, University Medical Center Goettingen, Goettingen, Germany, [2]D.I.N.E, Freie Universitaet Berlin, Berlin, Germany

17 * **How do Gyral Orientation and White Matter Anisotropy Affect the Electric Field Induced by TMS?, (O-W4)**
Alexander Opitz[1], Mirko Windhoff[1], Robin Heidemann[2], Robert Turner[2], Axel Thielscher[1]
[1]Max Planck Institute For Biological Cybernetics, Tuebingen, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

18 Rhythmic TMS of parietal cortex causes the local entrainment of oscillatory signatures of attention
Gregor Thut[1], Domenica Veniero[2], Vincenzo Romei[3], Carlo Miniussi[2], Philippe Schyns[1], Joachim Gross[1]
[1]Centre for Cognitive Neuroimaging, University of Glasgow, United Kingdom, [2]National Institute of Neuroscience, University of Brescia, Italy, [3]Institute of Cognitive Neuroscience, UCL, United Kingdom

19 Where does Transcranial Magnetic Stimulation stimulate?
Janine Bijsterbosch[1], Anthony Barker[2], Kwang-Hyuk Lee[1], Peter Woodruff[1]
[1]ScanLab, Academic Clinical Psychiatry, University of Sheffield, Sheffield, United Kingdom, [2]Department of Medical Physics and Clinical Engineering, University of Sheffield, Sheffield, United Kingdom

20 The effects of Theta-burst (TBS) rTMS on locally measured cortical response to somatosensory stimuli
Sébastien Thomas[1], Ajay Venkateswaran[1], Sujaya Neupane[1], Amir Shmuel[1]
[1]Montreal Neurological Institute, Montreal, Quebec

21 Dynamic probe of brain plasticity helps best predict functional gain following robotic therapy
Marie-Helene Milot[1], Vicky Chan[1], Steven Spencer[1], James Allington[1], Julius Klein[1], James Bobrow[1], David Reinkensmeyer[1], Steven Cramer[1]
[1]University of California, Irvine, United States

22 Cortical control of resting state condition in humans: a rTMS-EEG study
paolo capotosto[1], claudio babilon[2], Gian Luca Romani[1], maurizio corbetta[3]
[1]ITAB- Department of Neuroscience and Imaging- G.D'Annunzio University Of Chieti, Chieti, Italy, [2]Dip. Scienze Biomediche, Univ. di Foggia, Foggia, Italy, [3]Department of Neurology, Radiology, Anatomy & Neurobiology, Washington University School of Medicine, St.Louis, MO

23 Interhemispheric connectivity influences TMS-induced modulation during auditory processing
Jamila Andoh[1,2], Robert Zatorre[1,2]
[1]Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada, [2]International laboratory for Brain, Music, and Sound Research (BRAMS), Montreal, Quebec, Canada

24 RTMS modulates functional connectivity of dl prefrontal cortex and hippocampus during working memory
Edda Bilek[1], Christine Esslinger[2], Urs Braun[3], Elisabeth Ochs[3], Carina Sauer[3], Dagmar Gass[3], Heike Tost[4], Thomas Schulze[3], Marcella Rietschel[3], Peter Kirsch[3], Andreas Meyer-Lindenberg[5]
[1]Central Institute of Mental Health, Mannheim, Germany, [2]Mannheim, Germany, [3]Central Institute of Mental Health, Mannheim, Germany, [4]Central Institute of Mental Health (CIMH) Mannheim, Germany, Mannheim, Germany, [5]Central Institute of Mental Health (CIMH) Mannheim, Mannheim, Germany

25 Inhibition of Prefrontal Cortex Oxygenation Following Continuous Theta Burst Stimulation
Sara Tupak[1], Meike Badewien[1], Thomas Dresler[1], Tim Hahn[1], Lena Ernst[2], Ann-Christine Ehlis[2], Martin Herrmann[1], Jürgen Deckert[1], Andreas Fallgatter[2]
[1]Department of Psychiatry, University of Wuerzburg, Wuerzburg, Germany, [2]Department of Psychiatry, University of Tuebingen, Tuebingen, Germany

26 Influence of the amount of use on hand motor representation: effect of immobilization vs. training
Suzy Ngomo[1]
[1]Centre Interdisciplinaire de Recherche en Réadaptation et Intégration Sociale, Université Laval, Québec, Canada

27 Low frequency rTMS of the cerebellum has remote effects within the cerebral cortex
Traian Popa[1], Cécile Gallea[1], Romain Valabregue[1], Sabine Meunier[1], Stéphane Lehéricy[1]
[1]Centre de Recherche de l'Institut du Cerveau et de la Moelle épinière (CR-ICM), Paris, France

28 The role of the right parietal cortex in sound localization: a chronometric single-pulse TMS study
Ayse At[1], Lucas Spierer[2], Stephanie Clarke[2]
[1]CHUV, Lausanne,Switzerland, [2]CHUV, Lausanne, Switzerland

29 Daily rTMS to primary motor cortex augments slow motor learning: Behavioral and Imaging findings
Shalini Narayana[1], Wei Zhang[1], William Rogers[1], Casey Strickland[1], Crystal Franklin[1], Jack Lancaster[1], Peter Fox[1]
[1]Research Imaging Institute, University of Texas Health Science Center at San Antonio, San Antonio, TX, United States

30 Cortical Inhibition and Cognitive Fatigue in Multiple Sclerosis
Afiqah Yusuf[1], Rebecca Sussex[1], Benjamin Whatley[1], Avinash Vaidya[1], Lisa Koski[1]
[1]McGill University, Montreal, Quebec, Canada

31 Motor plasticity induced by theta burst stimulation: correlated measures of MEPs and EEG
Marine Vernet[1], Shahid Bashir[1], Jennifer Perez[1], Umer Najib[1], Alvaro Pascual-Leone[1]
[1]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

32 RTMS over right Inferior Parietal Cortex Induces Decrement of Spatial Sustained Attention
Je Yeon Lee[1], Kiwan Han[2], Jinsik Park[3], Yohan Son[3], Hyeongrae Lee[3], Kyung Ran Kim[4], Jeonghun Ku[5], Eun Lee[6], Sun I. Kim[7]
[1]Department of Biomedical Engineering, Hanyang Univ., Seoul, Korea, Republic of, [2]Severance Biomedical Science Institute, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [4]Department of Psychiatry, Yonsei University College of Medicine, Seoul, Republic Of Korea, [5]Keimung University, Daeku, Korea, Republic of, [6]Yonsei University College of Medicine, Seoul, Korea, Republic of, [7]Hanyang University, Seoul, Korea, Republic of

33 Noninvasive, Physiologic Characterization of Cortical Plasticity After Mild TBI Injury in Humans
Shahid Bashir[1], Marine Vernet[2], Yoo Woo-Kyoung[2], Mizrahi Ilan[2], Hugo Théoret[3], Alvaro Pascual-Leone[4]
[1]Harvard Medical School - Berenson-Allen Center for Noninvasive Brain Stimulation, Boston, MA, [2]Harvard Medical School - Berenson-Allen Center for Noninvasive Brain Stimulation, Boston, United States, [3]Département de psychologie, Université de Montréal, Montréal , Canada, [4]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

Disorders of the Nervous System

Alzheimer's Disease and Other Dementias

34* Insulin resistance impacts brain and cognition and is modulated by TOMM40 in middle-aged adults, (O-Th1)
Auriel Willette[1], Barbara Bendlin[1], Guofan Xu[1], Erik Kastman[1], Erin Jonaitis[2], Rebecca Koscik[2], Asenath La Rue[2], Bruce Hermann[2], Mark Sager[2], Sterling Johnson[1]
[1]Wisconsin Alzheimer's Disease Research Center, Department of Medicine, University of Wisconsin, Madison, WI, [2]Wisconsin Alzheimer's Institute, University of Wisconsin-Madison, Madison, WI

35 Structural and Functional Differences Precede Development of MCI in those at Genetic Risk for AD
Susan Bassett[1], Guillermo Verduzco[2], Catherine Bakker[2]
[1]Johns Hopkins University, [2]Johns Hopkins University, Baltimore, United States

36 ** **Concurrent analysis of structural MRI and proteomics data using parallel ICA in Alzheimer's Disease**
Habib Ganjgahi[1,2], Arash Nazeri[3,4], Tina Roostaei[5,4] Arman Eshaghi[6,4], Mohammad Ali Oghabian[7]
[1]Iranian National Center For Addiction Studies, Iran, Islamic Republic Of, [2]Neroimaging and Analysis Team, Research Center for Science and Technology in Medicine, Tehran University of Medical Sciences, Tehran, Iran, Islamic Replblic of, [3]Interdisciplinary Neuroscience Research Program, Tehran University of Medical Sciences, Tehran, Iran, Islamic Replblic of, [4]Multiple Sclerosis Research Center, Sina Hospital, Tehran, Iran, Islamic Replblic of, [5]Interdisciplinary Neuroscience Research Program, Tehran University of Medical Sciences, Tehran, Iran, Islamic Replblic of, [6]Interdisciplinary Neuroscience Research Program, Tehran University of Medical Sciences, Tehran, Iran, Islamic Replblic of, [7]Research Center for Science and Technologies, Tehran University of Medical Sciences, Tehran, Iran, Islamic Replblic of

37 ** **Superior Performance of a Multi-Stage PET Classifier for the Alzheimer's Disease Cascade**
Stephen Strother[1,2], Dawn Matthews[3], Ana Lukic[2], Randolph Andrews[3], Miles Wernick[4,2]
[1]Rotman Research Institute, Baycrest, Toronto, Canada, [2]Predictek, Inc., Chicago, IL, [3]Abiant, Inc., Chicago, IL, [4]Illinois Institute of Technology, Chicago, IL

38 Asymmetry of myelination of association fibers in normal aging and Alzheimer's disease
Eleonora Fornari[1], Philippe Maeder[2], Reto Meuli[2], Maria Knyazeva[3,4]
[1]CIBM-CHUV unit, Radiology Dept., CHUV and University of Lausanne, Lausanne, Switzerland, [2]Radiology Dept., CHUV and University of Lausanne, Lausanne, Switzerland, [3]Radiology Dept., CHUV and University of Lausanne, Lausanne, Switzerland, [4]LREN, Clinical Neuroscience Dept., CHUV and University of Lausanne, Lausanne, Switzerland

39 Multi modal MRI reveals early life brain changes in human ApoE-ε4 carriers
Ory Levy[1], Anat Bar-Shira[2], Avi Orr-Urtreger[2,1], Yaniv Assaf[1]
[1]Tel Aviv University, Tel Aviv, Israel, [2]The Genetic Institute, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel

40 Grey matter and white matter degeneration in the evolution of Alzheimer's disease

Kun-Hsien Chou[1], Wei-Ta Chen[2], Ker-Neng Lin[3], Jiing-Feng Lirng[2], Pei-Ning Wang[2], Ching-Po Lin[4]
[1]National Yang Ming University, Taiwan- Republic Of China, [2]Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China, [3]National Yang-Ming University, Taipei, Taiwan, Republic of China, [4]National Yang-Ming University, Taipei, Taiwan- Republic Of China

41 Amyloid demonstrates differential relationship with DMN function in normal elderly versus MCI

Andrew Ward[1,2], Aaron Schultz[3], Donald McLaren[4], Caroline Sullivan[1,2], J. Alex Becker[5], Keith Johnson[6,5,3], Vince Calhoun[7], Reisa Sperling[6,2,3]
[1]Department of Psychiatry, Massachusetts General Hospital, Boston, MA, [2]Department of Neurology, Brigham and Women's Hosptial, Boston, MA, [3]Department of Neurology, Massachusetts General Hospital, Boston, MA, [4]Massachusetts General Hospital, Boston, MA, [5]Department of Radiology, Massachusetts General Hospital, Harvard Medical School, Boston, MA, [6]Center for Alzheimer Research and Treatment, Department of Neurology, Brigham and Women's Hospital, Boston, MA, [7]Mind Research Network, Albuquerque, NM

42 White Matter Diffusivity is Higher Among Healthy Elders at Increased Risk for Alzheimer's Disease

Sally Durgerian[1], Melissa Lancaster[2], Michael Seidenberg[2], Kristy Nielson[3], John Woodard[4], J Carson Smith[5], Monica Matthews[2], Alissa Butts[3], Nathan Hantke[3], Stephen Rao[6]
[1]Medical College of Wisconsin, Milwaukee, United States, [2]Rosalind Franklin University of Medicine and Science, North Chicago, IL, [3]Marquette University, Milwaukee, WI, [4]Wayne State University, Detroit, MI, [5]University of Wisconsin - Milwaukee, Milwaukee, WI, [6]Cleveland Clinic, Cleveland, OH

43 Declines of metabotropic glutamate receptor type five availability in MCI individuals

Pedro Rosa[1], Jared Rowley[2], Dorothee Schoemaker[3], Sara Mohades[2], Jean-Paul Soucy[4], Vladimir Fonov[4], Serge Gauthier[5]
[1]McGill University, [2]Translational Neuroimaging Laboratory, Douglas Hospital, McGill University, Montreal, QC, [3]Translational neuroimaging laboratory, Montreal, quebec, [4]Montreal Neurological Institute, Montreal, Canada, [5]McGill Centre for Studies in Aging (MCSA), Montreal, QC

44 Resting state networks in tauopathies

Timothy Rittman[1], Boyd Ghosh[1], James Rowe[1]
[1]Department of Clinical Neuroscience, University of Cambridge, Cambridge, United Kingdom

45 Nonlinear Analysis of EEG for Early Detection of Cognitive Decline

Nancy Munro[1], Thibaut De Bock[2], Satyajit Das[2], Lee Hively[1], Juan Li[3], Lucas Broster[4], Charles Smith[5,6], Greg Jicha[5,6], Yang Jiang[4,6]
[1]Oak Ridge National Laboratory, Oak Ridge, TN, United States, [2]University of Tennessee, Knoxville, TN, United States, [3]Chinese Academy of Sciences, Beijing, China, [4]University of Kentucky, Department of Behavioral Science, Lexington, KY, United States, [5]University of Kentucky, Department of Neurology, Lexington, KY, United States, [6]Sanders-Brown Center on Aging, University of Kentucky College of Medicine, Lexington, KY, United States

46 Memory activation changes of aMCI subjects in the subregions of medial temporal lobe

Mingwu Jin[1,2], Victoria Pelak[3], Tim Curran[4], Rajesh Nandy[5], Dietmar Cordes[6]
[1]University of Texas at Arlington, Arlington, TX, [2]University of Colorado Dever, Aurora, CO, [3]University of Colorado Denver, Aurora, CO, [4]University of Colorado at Boulder, Boulder, CO, [5]University of California Los Angeles, Los Angeles, CA, [6]University Of Colorado Denver, Aurora, CO

47 Age Correction in Dementia – Matching to a Healthy Brain

Juergen Dukart[1], Matthias Schroeter[2], Karsten Mueller[2]
[1]Leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

48 Homocysteine levels are associated with regional brain volumes in 732 elderly subjects

Priya Rajagopalan[1], Xue Hua[2], Arthur Toga[3], Paul Thompson[4], the Alzheimer's Disease Neuroimaging Initiative (ADNI)[5]
[1]Laboratory of Neuro Imaging, Department of Neurology, UCLA School of Medicine, Los Angeles, CA, [2]Laboratory Of Neuro Imaging, Department Of Neurology, UCLA School Of Medicine, United States, [3]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [4]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [5]NIA ADEAR Center, Bathesda, MD

49 Folate gene associated with brain volumes: Replication in ADNI (N=740) and Queensland Twins (N=577)
Priya Rajagopalan[1], Neda Jahanshad[2], Ming-Chang Chiang[3], Jason Stein[4], Derrek Hibar[4], ARTHUR TOGA[5], Paul Thompson[6], Michael Weiner[7], Clifford Jack Jr[8], Andrew Saykin[9], Katie McMahon[10], Greig de Zubicaray[11], Nicholas Martin[12], Margaret Wright[12], the Alzheimer's Disease Neuroimaging Initiative (ADNI)[13], April Ryles[14]
[1]Laboratory of Neuro Imaging, Department of Neurology, UCLA School of Medicine, Los Angeles, CA, [2]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [3]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, [4]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [5]UCLA SCHOOL OF MEDICINE, LOS ANGELES, United States, [6]Laboratory of Neuro Imaging - UCLA School of Medicine, Los Angeles, CA, [7]UC San Francisco, Department of Veterans Affairs Medical Center, San Fransisco, CA, [8]Mayo Clinic, Rochester, MN, [9]Indiana University School of Medicine, Indianapolis, United States, [10]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [11]University Of Queensland, St. Lucia, Brisbane, QLD, [12]Queensland Institute of Medical Research, Brisbane, Australia, [13]NIA ADEAR Center, Bathesda, MD, [14]UCLA, Los Angeles, United States

50 Comparison between anatomically and probabilistic driven VOIs for detecting hypometabolism in MCI
Ricardo Soder[1], Jean-Paul Soucy[2], Serge Gauthier[3], Pedro Rosa-Neto[4]
[1]Translational Neuroimaging Laboratory, Douglas Hospital, McGill University, Montreal, QC, [2]Montreal Neurological Institute, Montreal, Canada, [3]McGill Centre for Studies in Aging (MCSA), Montreal, QC, [4]Translational Neuroimaging Laboratory, Montreal, Canada

51 An event-based model for disease progression and its application to familial Alzheimer's disease
Hubert Fonteijn[1], Marc Modat[1], Matt Clarkson[1], Josephine Barnes[2], Manja Lehmann[2], Sebastien Ourselin[3], Nick Fox[2], Daniel Alexander[1]
[1]Centre for Medical Image Computing, University College London, London, United Kingdom, [2]Dementia Research Centre, UCL Institute of Neurology, University College London, London, United Kingdom, [3]Centre for Medical Image Computing, London, United Kingdom

52 Impact of APOE4 on brain activation during semantic verbal fluency in young healthy subjects
Valentin Markov[1], Axel Krug[2], Sören Krach[3], Andreas Jansen[4], Thomas Eggermann[5], Klaus Zerres[5], Tony Stöcker[6], Nadim Shah[7], Klaus Mathiak[1], Kircher Tilo[2]
[1]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [2]Department of Psychiatry and Psychotherapy, Philipps-University Marburg, Marburg, Germany, [3]Department of Psychiatry, Section of BrainImaging, University of Marburg, Marburg, Germany, [4]Department of Psychiatry and Psychotherapy, Section of BrainImaging, University of Marburg, Marburg, Germany, [5]Institute of Human Genetics, RWTH Aachen University, Aachen, Germany, [6]Institute of Neuroscience and Biophysics 3 – Medicine, Research Center Jülich, Jülich, Germany, [7]Institute of Neuroscience and Medicine, INM-4, Research Centre Julich, Julich, Germany

53 Structural correlates of memory performance in amnestic mild cognitive impairment: a DTI study
Andrea King[1], Anke Lorenz[1], Julia Linke[1], Patric Meyer[1], Frank Hentschel[1], Lutz Frölich[1], Michèle Wessa[1]
[1]Central Institute of Mental Health, Mannheim, Germany

54 Cognitive training normalizes brain activation patterns in subjects with mild cognitive impairment
David Prvulovic[1], David Linden[2], Corinna Haenschel[3], Harald Hampel[4]
[1]Department of Psychiatry, Psychosomatic Medicine and Psychotherapy, University of Frankfurt, Frankfurt, Germany, [2]School of Psychology, Cardiff, United Kingdom, [3]3The University of Bangor, Welsh Institute of Cognitive Neuroscience, School of Psychology, Bangor, United Kingdom, [4]Frankfurt University, Department of Psychiatry, psychosomatics and psychotherapy, Frankfurt, Germany

55 Alzheimer's Disease Weakens the Structural and Functional Connections in the Default-Mode Network
David Zhu[1], Shantanu Majumdar[1], Kevin Berger[1], Igor Korolev[1], Sarah Kiel[1], Holly Nieusma[1], Andrea Bozoki[1]
[1]Michigan State University, East Lansing, MI

56 Alterations in Multiple Measures of White Matter Integrity in Amnestic Mild Cognitive Impairment
Brian Gold[1], Yang Jiang[1], Greg Jicha[1], David Powell[1]
[1]University of Kentucky, Lexington, KY

57 Nucleus Accumbens atrophy in early- and late-onset Alzheimer's disease
Michela Pievani[1], Martina Bocchetta[1], Marina Boccardi[1], Samantha Galluzzi[1], Matteo Bonetti[2], Paul Thompson[3], Giovanni Frisoni[1]
[1]LENITEM, IRCCS Centro San Giovanni di Dio - FBF, Brescia, Italy, [2]Service of Neuroradiology, Istituto Clinico Citta' di Brescia, Brescia, Italy, [3]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States

58 Interhemispheric efficency in healthy aging, mild cognitive impairment and Alzheimer's disease
Jennyfer Ansado[1], Louis Collins[2], Oury Monchi[3], Vladimir Fonov[2], Sven Joubert[4], Sylvane Faure[5], Francesco Tomaiuolo[6], Michael Petrides[7], Yves Joanette[8]
[1]Université de Montréal, Canada, [2]McConnell Brain Imaging Centre, Montreal, Canada, [3]University of Montreal, Montreal, Canada, [4]Université de Montréal, Montreal, Canada, [5]Université de Nice-Sophia Antipolis, Nice, France, [6]Centro Clinico di Riabilitazione Multispecialistico, Volterra, Italy, [7]Montreal Neurological Institute, Montreal, Canada, [8]Faculty of medicine, Université de Montréal, Montreal, Canada

59 Morphological Brain Connectivity in Alzheimer's disease
Gretel Sanabria-Diaz[1], Lester Melie-García[1], Yasser Iturria-Medina[1], Yasser Alemán-Gómez[2], Marlis Ontivero-Ortega[1], Eduardo Martínez-Montes[1]
[1]Cuban Neuroscience Center, Havana, Cuba, [2]Unidad de Medicina y Cirugía Experimental Hospital General Universitario Gregorio Marañón, Madrid, Spain

60 Selective white matter degradation associated with selective impairment of paired associate learning
Erin Boespflug[1], Judd Storrs[2], Marcelle Shidler[3], Sara Sadat-Hossieny[3], Robert Krikorian[3]
[1]University of Cincinnati College of Medicine, Cincinnati, OH, [2]University of Cincinnati Center for Imaging Research, Cincinnati , OH, [3]University of Cincinnati Department of Psychiatry, Cincinnati , OH

61 Towards a cognitive neuropsychiatry of frontotemporal dementia
Matthias Schroeter[1], Caroline Chwiesko[1], Christine Deuschl[2], Else Schneider[1], Jane Neumann[2]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, Leipzig, Germany

62 Critical network epicenters and connectivity-based vulnerability in neurodegenerative disease
Juan Zhou[1,2,3], Efstathios Gennatas[1], Joel Kramer[1], Bruce Miller[1], William Seeley[1]
[1]University of California, San Francisco, San Francisco, CA, United States, [2]Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, United States, [3]Natha S. Kline Institute for Psychiatric Research, Orangeburg, NY, United States

63 Regional CBF Measured by ASL MRI Predicts Cognitive Performance Difficulty in Alzheimer's Disease
Ze Wang[1], Zhengjun Li[2], Aniseh Kadivar[3], John Dunlop[4], John Detre[3], Murray Grossman[3], David Wolk[3]
[1]University of Pennsylvania, Philadelphia, USA, [2]Shanghai Jiao Tong University, Shanghai, China, [3]University of Pennsylvania, Philadelphia, PA, [4]Pfizer Inc., Princeton, NJ

64 Meta-analyses-based SVM classification on FDG-PET and MRI improves detection of Alzheimer's disease
Juergen Dukart[1], Karsten Mueller[2], Henryk Barthel[3], Arno Villringer[2], Osama Sabri[3], Matthias Schroeter[2]
[1]Leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]Department of Nuclear Medicine, University of Leipzig, Leipzig, Germany

65 MRI and PET combined analysis in the diagnosis of early and prodromal Alzheimer's disease
Andrea Chincarini[1], Paolo Bosco[1], Mario Esposito[1], Gianluca Gemme[1], Flavio Nobili[2], Luca Rei[1]
[1]INFN, Genova, Italy, [2]Azienda Ospedale S. Martino, Genov, Italy

66 Grey and white matter differences can be found between MCI converters and non-converters at baseline
Gwenaelle Douaud[1], Ricarda Menke[2], Achim Gass[3], Andreas Monsch[3], Marc Sollberger[3], Anil Rao[4], Brandon Whitcher[4], Paul Matthews[5], Stephen Smith[1]
[1]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [2]University of Oxford, FMRIB Centre, Oxford, United Kingdom, [3]University Hospital Basel, Basel, Switzerland, [4]GlaxoSmithKline, London, United Kingdom, [5]Imperial College London, London, United Kingdom

67 Structure from motion perception in healthy ageing and MCI: Studying behaviour and fMRI activation
Britta Graewe[1,2], Raquel Lemos[3], Reza Farivar[4], Carlos Ferreira[2], Isabel Santana[3], Peter de Weerd[1], Miguel Castelo-Branco[2]
[1]Department of Cognitive Neuroscience, Faculty of Psychology & Neuroscience, Maastricht University, Maastricht, Netherlands, [2]Visual Neuroscience Lab, IBILI, University of Coimbra, Coimbra, Portugal, [3]Neurology Department, Coimbra University Hospital, Coimbra, Portugal, [4]Department of Psychology, McGill University, Montreal, Canada

68 Impairment and compensation coexist in resting state executive control network in patients with aMCI
Liyong Wu[1,2], Ricardo Soder[1,2,3], Felix Carbonnell[3], dorothee schoemaker[1,2], Jared Rowley[1,2], Sara Mohades[1,2], Viviane Sziklas[4], Vladmir Fonov[3], Pierre Bellec[3], Alain Dagher[3], Amir Shmuel[3], Serge Gauthier[2,1], Pedro Neto[1,2,3]
[1]Translational Neuroimaging Laboratory, Douglas Hospital, McGill University, Montreal, Canada, [2]McGill Centre for Studies in Aging (MCSA), Montreal, Canada, [3]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Canada, [4]Department of Psychology, Neuropsychology Unit, McGill University, Montreal, Canada

69 Hyper- or hypo-activation with the Alzheimer's disease? Comparison between random- and mixed-effects
Junghoe Kim[1], Jong-Hwan Lee[1]
[1]Dept. of Brain and Cognitive Engineering, Korea University, Seoul, Korea, Republic of

70 Automated diagnostic classifiers using imaging, genotyping, and gene expression data

Liana Apostolova[1], Giovanni Copolla[2], Jeffrey Cummings[3], Fying Gao[2], Kristy Hwang[2], Omid Kohannim[4], Paul Thompson[5]
[1]UCLA, Los Angeles, United States, [2]UCLA, Los Angeles, CA, [3]Lou Ruvo Institute, Las Vegas, NV, [4]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [5]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States

71 Association between Fornix Fractional anisotropy and Hippocampal Volume changes in aMCI

Sara Mohades[1], Jared Rowley[1], Pedro Rosa-Neto[1], Dorothee Schoemaker[1], Vladmir Fonov[2], Alain Dagher[2], Ricardo Bernardi[1], Serge Gauthier[3], Amir Schmuel[2], Viviane Sziklas[4]
[1]Translational Neuroimaging Laboratory, Douglas Hospital, McGill University, Montreal, Canada, [2]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Canada, [3]McGill Centre for Studies in Aging (MCSA), Montreal, Canada, [4]Department of Psychology, Neuropsychology Unit, McGill University, Montreal, Canada

72 Spectrum of white matter changes in amnestic mild cognitive impairment

Jared Rowley[1], Dorothee Schoemaker[1], Sara Mohades[1], Vladimir Fonov[2], Alain Dagher[2], Amir Shmuel[2], Ricardo Bernardi Soder[1], Serge Gauthier[3], Pedro Rosa-Neto[1]
[1]Translational Neuroimaging Laboratory, McGill University, Montreal, Qc, [2]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Qc, [3]McGill Centre for Studies in Aging, Montreal, Qc

73 Regional cerebral blood flow and Wechsler Memory Scale-Revised in the elderly

Fumitoshi Niwa[1], Masaki Kondo[1], Masanori Nakagawa[2], Jiro Imanishi[3]
[1]Kyoto Prefectural University of Medicine, Kyoto, Japan, [2]Kyoto Prefectural University of Medicine, kyoto, Japan, [3]Center for Integrative Meidicine, Meiji Univesity of Integrative Medicine, Kyoto, Japan

74 Baseline CSF Biomarkers in Cognitively Healthy Adults Predict Brain Atrophy: A TBM study

Aparna Sodhi[1,2], Erik Kastman[1,2], Auriel Willette[1], Guofan Xu[1,2], Nancy Davenport[1,2], Andrew Alexander[3,4,5], Howard Rowley[6], Sterling Johnson[1,2], Sanjay Asthana[1,2], Mark Sager[1,2], Cynthia Carlsson[1,2], Barbara Bendlin[1,2]
[1]Wisconsin Alzheimer's Disease Research Center, Department of Medicine, University of Wisconsin, Madison, WI, [2]Geriatric Research Education and Clinical Center, William S. Middleton Memorial Veteran's Hospital, Madison, WI, [3]University of Wisconsin School of Medicine and Public Health, Department of Medical Physics, Madison, WI, [4]University of Wisconsin School of Medicine and Public Health, Department of Psychiatry, Madison, WI, [5]Waisman Laboratory for Brain Imaging and Behavior, Madison, WI, [6]University of Wisconsin School of Medicine and Public Health, Department of Radiology, Madison, WI

75 Discriminative analysis of resting-state functional connectivity of early Alzheimer's disease

Zhengjia Dai[1], Chaogan Yan[1], Zhiqun Wang[2], Jinhui Wang[1], Kuncheng Li[2,3], Yong He[1]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, [2]Department of Radiology, Xuanwu Hospital of Capital Medical University, Beijing, China, [3]Key Laboratory for Neurodegenerative Diseases, Capital Medical University, Ministry of Education, Beijing, China

76 Neural correlates of strategic cognitive training in patients with mild cognitive impairment

Joana Balardin[1], Marcelo Batistuzzo[2], Maria da Graça Martin[2], Jerusa Smid[3], Claudia Porto[3], Ricardo Nitrini[2], Cary Savage[4], Edson Amaro[5], Eliane Miotto[2]
[1]University of São Paulo, Sao Paulo, SP, [2]University of Sao Paulo, Sao Paulo, SP, [3]HCFMUSP, Sao Paulo, SP, [4]University of Kansas, Kansas City, KS, [5]University of Sao Paulo, Sao Paulo, SP, Brazil

77 Two limb apraxia patient profiles in Corticobasal Syndrome with distinct SPECT perfusion rates

Vessela Stamenova[1], Eric Roy[2], Sandra Black[3]
[1]Unviersity of Toronto, Toronto, ON, [2]University of Waterloo, Waterloo, Ontario, [3]Sunnybrook Health Sciences Centre, Toronto, Canada

78 Changes in Vascular Cognitive Impairment No Dementia: a Combined VBM and Resting-State fMRI Study

Yi Liye[1,2], Wang Jinhui[3], Liu Pengfei[4], Yong He[3], Jiang Chuanlu[2], Han Ying[1]
[1]Xuanwu Hospital, Capital Medical University, Beijing, China, [2]The Second Clinical College of Harbin Medical University, Harbin, China, [3]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, [4]The First Clinical College of Harbin Medical University, Harbin, China

79 Alzheimer's disease affects the landscape of source EEG synchronization

Cristian Carmeli[1], Richard Frackowiak[1], Maria Knyazeva[2]
[1]Department of Clinical Neuroscience, Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne, Switzerland, [2]Department of Clinical Neuroscience, Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne, Vaud

80 Altered Spontaneous Brain Activity in Alzheimer's disease and Mild Cognitive Impairment

Zengqiang Zhang[1], Haitao Dai[1], Yong Liu[2], Yixuan Niu[1], Pan Wang[3], Xi Zhang[1], Bo Zhou[3], Luning Wang[3]
[1]Department of Neurology, Institute of Geriatrics and Gerontology, Chinese PLA General Hospital, Beijing, China, [2]CCM, NLPR, Institute of Automation, Beijing, China, [3]Department of Neurology, Institute of Geriatrics and Gerontology, China PLA General Hospital, Beijing, China

81 Functional networks connectivity in patients with Alzheimer's disease and Mild Cognitive Impairment
Michela Pievani[1,2], Federica Agosta[2], Samantha Galluzzi[1], Massimo Filippi[2], Giovanni Frisoni[1]
[1]LENITEM, IRCCS Centro San Giovanni di Dio - FBF, Brescia, Italy, [2]Neuroimaging Research Unit, Scientific Institute and University Hospital San Raffaele, Milan, Italy

82 Neural Substrates of Semantic Deficits in Amnestic Mild Cognitive Impairment : Evidence from MEG
Jessica Pineault[1], Stephan Grimault[1,2], Jacinthe Lacombe[1,3], Yann Potiez[1], Pierre Jolicoeur[1], Sven Joubert[1,3]
[1]Département de psychologie et CERNEC, Université de Montréal, Montréal, QC, Canada, [2]CNRS, Marseille, France, [3]Centre de Recherche de l'Institut Universitaire de Gériatrie de Montréal, Montréal, QC, Canada

83 Distinct default mode connectivity in ApoE4 carriers independent of TOMM40 poly-T repeat length
Jessica Damoiseaux[1], Juan Zhou[2], William Seeley[3], Bruce Miller[4], Joel Kramer[4], Michael Greicius[5]
[1]Stanford University School of Medicine, Stanford, United States, [2]Memory and Aging Center, Department of Neurology, University of California San Francisco, San Francisco, CA, [3]UC San Francisco, San Francisco, United States, [4]UCSF, San Francisco, CA, [5]Stanford University Medical Center, Stanford, United States

84 Definition of intermediate phenotypes for impact of APOE in MCI converters to Alzheimer's disease
Katrin E Morgen[1], Lutz froelich[2], Heike Tost[2], Johannes Kornhuber[3], Harald Hampel[4], Stefan Teipel[5], Michael Ewers[6], Frank Jessen[7], Oliver Peters[6], Holger Jahn[8], Christian Luckhaus[9], Michael Huell[10], Hermann-Josef Gertz[11], Johannes Schroeder[12], Johannes Pantel[13], Isabella Heuser[6], Jens Wiltfang[14], Eckart Ruether[15], Wolfgang Maier[16], Andreas Meyer-Lindenberg[17]
[1]Central Institute of Mental Health, Mannheim, Germany, [2]Central Institute of Mental Health (CIMH), Mannheim, Germany, [3]Department of Psychiatry and Psychotherapy, Erlangen, Germany, [4]Frankfurt University, Department of Psychiatry, psychosomatics and psychotherapy, Frankfurt, Germany, [5]Rostock University, Department of Neurology, Rostock, Germany, [6]Charite, Department of Psychiatry and Psychotherapy, Berlin, Germany, [7]Bonn University, Department of Psychiatry, Bonn, Germany, [8]Hamburg University, Department of Psychiatry and Psychotherapy, Hamburg, Germany, [9]Duesseldort University, Department of Psychiatry and Psychotherapy, Duesseldorf, Germany, [10]Freiburg University, Geriatric Center, Freiburg, Germany, [11]Leipzig University, Leipzig, Germany, [12]Heidelberg University, Department of Geriatric Psychiatry, Heidelberg, Germany, [13]Frankfurt University, Department of Psychiatry, Psychosomatics and Psychotherapy, Frankfurt, Germany, [14]Essen University, Department of Psychiatry and Psychotherapy, Essen, Germany, [15]Goettingen University, Department of Psychiatry and Psychotherapy, Goettingen, Germany, [16]Bonn University, Department of Psychiatry and Psychotherapy, Bonn, Germany, [17]Central Institute of Mental Health (CIMH) Mannheim, Mannheim, Germany

85 Abnormal resting-state activity in default mode network of aMCI subjects
Mingwu Jin[1,2], Victoria Pelak[3], Dietmar Cordes[4]
[1]University of Texas at Arlington, Arlington, TX, [2]Univerity of Colorado Denver, Aurora, CO, [3]University of Colorado Denver, Aurora, CO, [4]University Of Colorado Denver, Aurora, CO

86 Landscape of white matter and gray matter changes through the course of Alzheimer's Disease
Xiuchao Sui[1], Chunshui Yu[2], Xinqing Zhang[3], Jieqiong Liu[3], Yunyun Duan[4], Tianzi Jiang[5]
[1]Institute of Automation, Chinese Academy of Sciences, Beijing,China, [2]Department of Radiology, Tianjin Medical University General Hospital, Tianjin, China, [3]Department of Neurology, Xuanwu Hospital of Capital University of Medical Sciences, Beijing, China, [4]Department of Radiology, Xuanwu Hospital of Capital University of Medical Sciences, Beijing, China, [5]Institute Of Automation, Chinese Academy Of Sciences, Beijing, China

87 Altered Grey Matter Volumes and Functional Connectivity Pattern in Hippcampus in AD and MCI
Yong Liu[1], Bo Zhou[2], Zengqiang Zhang[2], Ningyu An[2], Luning Wang[2], Haitao Dai[2], Pan Wang[2], Xi Zhang[2], Tianzi Jiang[1]
[1]LIAMA Center for Computational Medicine (CCM), National Laboratory of Pattern Recognition, Institute of Automation, Beijing, China, [2]Department of Neurology, Division of Nanlou, Chinese People's Liberation Army General Hospital, Beijing, China

88 Correlation of magnetization transfer and diffusion MRI in sporadic Creutzfeldt-Jakob disease
Gunther Helms[1], Markus Matros[2], Kai Kallenberg[3], Inga Zerr[4], Walter Schulz-Schaeffer[5], Peter Dechent[2]
[1]MR-Research in Neurology and Psychiatry, Universitymedicine Goettingen, Goettingen, Germany, [2]MR-Research in Neurology and Psychiatry, Goettingen University Medical Center, Goettingen, Germany, [3]Dept. of Neuroradiology, Goettingen University Medical Center, Goettingen, Germany, [4]Dept. Neurology, Goettingen University Medical Center, Goettingen, Germany, [5]Dept. of Neuropathology, Goettingen University Medical Center, Goettingen, Germany

89 The Possible Prophylactic Mechanism of Chinese Chess Playing on Alzheimer's Disease*
Dongmei Liang[1], Timon Cheng-Yi Liu[1], Beijun Huang[1], lihua qiu[2], Luqing Wei[3], Huafu Chen[3], Qizhu Wu[4], Xiaoqi Huang[4], Qiyong Gong[4]
[1]College of Sports Science, South China Normal University, Guangzhou, China, [2]Huaxi MR Research Center, Department of Radiology,West China Hospital of Sichuan University, Chengdu, China, [3]Key Laboratory for Neuroinformation of Ministry of Education, University of Electronic Science and T, Chengdu, China, [4]Huaxi MR Research Center, Department of Radiology, West China Hospital of Sichuan University, Chengdu, China

90 Resting state fMRI correlates of memory perfomances in amnestic mild cognitive impairment
Dorothee Schoemaker[1], Ricardo Bernardi Soder[1], Felix Carbonell Gonzalez[2], Jared Rowley[1], Sara Mohades[3], Viviane Sziklas[4], Vladmir Fonov[5], Pierre Bellec[5], Alain Dagher[6], Amir Shmuel[6], Serge Gauthier[7], Pedro Rosa-Neto[8]
[1]Translational Neuroimaging Laboratory, Douglas Hospital, McGill University, Verdun, Quebec, [2]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Quebec, [3]Translational Neuroimaging Laboratory, Douglas Hospital, McGill University, Verdun, QC, [4]Department of Psychology, Neuropsychology Unit, McGill University, Montreal, QC, [5]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, QC, [6]MNI, McGill University, Montreal, Canada, [7]McGill Centre for Studies in Aging (MCSA), Montreal, QC, [8]Mcgill University, Montreal, Canada

91 Retinal nerve fiber thickness as a biomarker in Alzheimer's disease
Philip Cook[1], Brian Avants[1], Laura Balcer[1], Murray Grossman[1], James Gee[1]
[1]University of Pennsylvania, Philadelphia, PA

92 Masking effect on Default Mode Network identification in MCI and Alzheimer`s disease
Jungho Cha[1], Uicheul Yoon[1], Sang Won Seo[2], Sun I. Kim[1], Duk L. Na[2], Jong-Min Lee[1]
[1]Hanyang University, Seoul, Korea, Republic of, [2]Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of

93 Functional MRI of parietal cortex in relation to episodic memory performance
Christiane Oedekoven[1], Andreas Jansen[1], Dirk Leube[2]
[1]Department of Psychiatry and Psychotherapy, Section of BrainImaging, Philipps-University, Marburg, Germany, [2]Department of Psychiatry and Psychotherapy, Philipps-University, Marburg, Germany

94 Determining effects of APOE4 allele on Alzheimer's disease structural brain network
Tina Roostaei[1], Arash Nazeri[1], Arman Eshaghi[1], Amir Shirazi[1], Habib Ganjgahi[1]
[1]Tehran University of Medical Sciences, Tehran, Iran, Islamic Replblic of

95 Cerebral Amyloid Angiopathy impacts resting-state connectivity
Stefano Peca[1], Cheryl McCreary[2,3,4], Eric Smith[2,3,4], Bradley Goodyear[1,2,3,4,5]
[1]Seaman Family MR Research Centre, University of Calgary, Calgary, Canada, [2]Department of Radiology, University of Calgary, Calgary, Canada, [3]Hotchkiss Brain Institute, University of Calgary, Calgary, Canada, [4]Department of Clinical Neurosciences, University of Calgary, Calgary, Canada, [5]Department of Psychiatry, University of Calgary, Calgary, Canada

96 Differentiation of aMCI Subjects and Normal Controls using Multivariate Analysis of fMRI Data
Dietmar Cordes[1], Mingwu Jin[2], Victoria Pelak[2], Tim Curran[3], Rajesh Nandy[4]
[1]University Of Colorado Denver, Aurora, United States, [2]University of Colorado-Denver, Aurora, United States, [3]University of Colorado-Boulder, Boulder, United States, [4]UCLA, Los Angeles, United States

Brain Stimulation

Autism

97* Auditory cortical structure is related to enhanced pitch processing in autism spectrum disorder, (O-Th4)
Nicholas Foster[1], Fabienne Samson[2], Laurent Mottron[2], Krista Hyde[3]
[1]Faculty of Medicine, Montreal Children's Hospital, McGill University, Montreal, Canada, [2]Centre d'Excellence en Troubles Envahissants du Développement de l'Université de Montréal (CETEDUM), Montreal, Canada, [3]Montreal Children's Hospital, McGill University, Montreal, Canada

98 Multivariate classification of structural MRI in children with autism**
Lucina Uddin[1], Srikanth Ryali[1], Christina Young[1], Tianwen Chen[1], Amirah Khouzam[1], Nancy Minshew[2], Antonio Hardan[1], Vinod Menon[1]
[1]Stanford University School of Medicine, Stanford, CA, USA, [2]University of Pittsburgh, Pittsburgh, PA, USA

99 Altered Functional Deactivation and Connectivity in the "Resting Brain" in Autism**
Donna Murdaugh[1], Mark Pennick[1], Hrishikesh Deshpande[1], Rajesh Kana[1]
[1]University of Alabama at Birmingham, Birmingham, AL

100 Canonical Correlation Analysis of Cortical Thickness in Adolescents with Autism Spectrum Disorders**
Masaya Misaki[1], Gregory Wallace[1], Nathan Dankner[1], Alex Martin[1], Peter Bandettini[1]
[1]LBC/NIMH/NIH, Bethesda, MD

101 Vibrotactile phase-locking in first-degree relatives of persons with autism spectrum disorders**
Don Rojas[1], Alissa Wallace[2], Katie Youngpeter[2], Dan Collins[2], Susan Hepburn[2]
[1]University of Colorado Anschutz Medical Center, [2]University of Colorado Anschutz Medical Center, Aurora, CO

102 Whole Brain Functional Connectivity Classification of Autism
Jared Nielsen[1], Jeffrey Anderson[1], Michael Adam Ferguson[1], T. Jason Druzgal[2], Alyson Froehlich[1], Molly DuBray[1], Jason Cooperrider[1], Annahir Cariello[1], Nicholas Lange[3], Andrew Alexander[4], Erin Bigler[5], Janet Lainhart[1]
[1]University of Utah, Salt Lake City, United States, [2]University of Virginia, Charlottesville, United States, [3]Harvard University, Boston, United States, [4]University of Wisconsin School of Medicine and Public Health, Department of Medical Physics, Madison, WI, [5]Brigham Young University, Provo, United States

103 Neural correlates of moral decision making in autism spectrum disorder
Ute Habel[1,2], Katharina Pauly[3,2], Ruben Gur[4], Frank Schneider[2], Karla Schneider[2]
[1]University of Aachen, Aachen, Germany, [2]RWTH Aachen University, Department of Psychiatry, Psychotherapy and Psychosomatics, Aachen, Germany, [3]RWTH Aachen University, Aachen, Germany, [4]University of Pennsylvania and the Philadelphia Veterans Administration Medical Center, Philadelphia, PA

104 Whole Brain Structural and Functional Connectivity Networks in Autism
Jeffrey Rudie[1,2], Jesse Brown[3,2], Leanna Hernandez[1,2], Susan Bookheimer[3,2], Mirella Dapretto[1,2]
[1]Brain Mapping Center, UCLA, Los Angeles, United States, [2]Psychiatry and Biobehavioral Sciences, UCLA, Los Angeles, United States, [3]Center for Cognitive Neurosciences, UCLA, Los Angeles, United States

105 Reduced Functional Connectivity of the Amygdala and Dorsal Anterior Cingulate in ASD
Patrick Cox[1], Stuart Washington[2], Evan Gordon[1], Jasmit Brar[2], Laura Girton[2], Ayichew Hailu[2], Amanda Wolfe[2], Samantha Warburton[2], Juma Mbwana[2], William Gaillard[3], M. Layne Kalbfleisch[4], John Van Meter[2]
[1]Interdisciplinary Program in Neuroscience, Georgetown University, Washington, DC, United States, [2]Center for Functional and Molecular Imaging, Georgetown University Medical Center, Washington, DC, United States, [3]Children's National Medical Center, Washington, DC, United States, [4]Krasnow Investigations of Developmental Learning and Behavior, George Mason University, Faifax, VA, United States

106 Aberrant Interregional Neural Synchrony in Autism Spectrum Disorders Revealed by Resting-State MEG
Avniel Ghuman[1], Rebecca van den Honert[1], Eunice Dixon[1], Briana Robustelli[1], Gregory Wallace[1], Alex Martin[1]
[1]Laboratory of Brain and Cognition, National Institute of Mental Health, Bethesda, MD

107 Differential Face Inversion Effect in Children with Autism Spectrum Disorder Specific to Human Faces
Andrew Breeden[1], Leah Lozier[1,2], Katherine Lawson[1], Amy Chudgar[1], Natalie Ullman[1], William Gaillard[3], John VanMeter[1]
[1]Center for Functional and Molecular Imaging, Georgetown University Medical Center, Washington, DC, [2]Interdisciplinary Program in Neuroscience, Georgetown University, Washington, DC, [3]The Center for Neuroscience and Behavioral Medicine, Children's National Medical Center, Washington DC, United States

108 Diminished grey matter within the hypothalamus in autism disorder
Florian Kurth[1], Katherine Narr[2], Roger Woods[2], Joseph O'Neill[1], Jeffry Alger[2], Rochelle Caplan[1], James McCracken[1], Arthur Toga[2], Jennifer Levitt[1]
[1]Department of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA, [2]Department of Neurology, UCLA School of Medicine, Los Angeles, CA

109 Anatomical brain abnormalities in Autism Spectrum Disorder female children detected with VBM and SVM
Alessandra Retico[1], Sara Calderoni[2], Laura Biagi[3], Raffaella Tancredi[3], Filippo Muratori[2], Michela Tosetti[3]
[1]INFN, Pisa, Italy, [2]IRCCS Stella Maris Foundation and Division of Child Neurology and Psychiatry, University of Pisa, Pisa, Italy, [3]IRCCS Stella Maris Foundation, Pisa, Italy

110 Shared and Distinct Brain Network Information Flow in Autism, ADHD, & Typically Developing Children
Adriana Di Martino[1], Xi-Nian Zuo[2,1], Clare Kelly[1], Rebecca Grzadzinski[1], Maarten Mennes[1], Ariel Schvarcz[1], Carolyn Kessler[1], Catherine Lord[3], F Xavier Castellanos[1,4], Michael Milham[1,4]
[1]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, United States, [2]Institute of Psychology, Chinese Academy of Sciences, Beijing, Beijing, [3]4University of Michigan Autism and Communication Disorders Center, Ann Arbor, MI, [4]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY

111 Atypical EEG Complexity in Autism Spectrum Conditions: A Multiscale Entropy Analysis
Ana Catarino[1,2], Owen Churches[2], Simon Baron-Cohen[3], Alexandre Andrade[4], Howard Ring[2]
[1]Institute of Biophysics and Biomedical Engineering, Faculty of Sciences, University of Lisbon, Lisbon, Portugal, [2]Cambridge Intellectual and Developmental Disabilities Research Group, University of Cambridge, Cambridge, United Kingdom, [3]Autism Research Centre, University of Cambridge, Cambridge, United Kingdom, [4]IBEB-FCUL, Lisboa, Portugal

112 FMRI study of the Thatcher Effect in high functioning autism
Nicole Zurcher[1], Katherine Cornes[2], Nick Donnelly[2], Julie Hadwin[2], Loyse Hippolyte[1], Eric Lemonnier[3], Nouchine Hadjikhani[1,4]
[1]Brain Mind Institute, EPFL, Lausanne, Switzerland, [2]School of Psychology, University of Southampton, Southampton, United Kingdom, [3]CRA Bretagne, Centre Hospitalo-Universitaire de Brest, Brest, France, [4]Harvard Medical School, Boston, MA, United States

113 Cortical thickness differences between autistic individuals with and without delayed speech onset
Krista Hyde[1], Nicholas Foster[1], Fabienne Samson[2], Laurent Mottron[2]
[1]Montreal Children's Hospital, McGill University, Montreal, Canada, [2]Centre d'Excellence en Troubles Envahissants du Développement de l'Université de Montréal (CETEDUM), Montreal, Canada

114 Resting State Functional Connectivity MRI Based Prediction of Autism vs. Typically Developing
Pamela Douglas[1], Jeffrey Rudie[2], Jesse Brown[3], Mark Cohen[3], Ariana Anderson[4], Susan Bookheimer[5], Mirella Dapretto[6]
[1]UCLA (co-first author), Los Angeles, United States, [2]UCLA (co-first author), Los Angeles, CA, [3]UCLA, Los Angeles, CA, [4]Malibu, United States, [5]Departmen of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA, [6]UCLA, Los Angeles, United States

115 Aberrant Arithmetic Processing in Autism Spectrum Disorder
Teresa Iuculano[1,2], Miriam Rosenberg-Lee[2], Amirah Khouzam[2], Jennifer Philips[2], Antonio Hardan[2], Lucina Uddin[2], Vinod Menon[2]
[1]University College London, London, UK, [2]Stanford University, Stanford, CA

116 Alterations in functional and structural connectivity provide correlates for symptoms in autism
Sophia Mueller[1], Daniel Keeser[2], Andrea Samson[3], Kristina Hennig-Fast[2], Ute Coates[1], Maximilian Reiser[1], Thomas Meindl[4]
[1]Institute of Clinical Radiology, University Hospitals Munich, Munich, Germany, [2]Department of Psychiatry and Psychotherapy, Ludwig-Maximilian University, Munich, Germany, [3]Department of Psychology, Stanford University, Stanford, CA, [4]University Munich, Munich, Germany

117 Task-specific functional connectivity in autism: a study using the Wavelet Coherence Transform
Ana Catarino[1,2], Alexandre Andrade[3], Owen Churches[2], Simon Baron-Cohen[4], Howard Ring[2]
[1]Institute of Biophysics and Biomedical Engineering, Faculty of Sciences, University of Lisbon, Lisbon, Portugal, [2]Cambridge Intellectual and Developmental Disabilities Research Group, University of Cambridge, Cambridge, United Kingdom, [3]IBEB-FCUL, Lisboa, Portugal, [4]Autism Research Centre, University of Cambridge, Cambridge, United Kingdom

118 Large-scale network analysis reflects big-world characteristics in ASD
Pablo Barttfeld[1], Jorge Calvar[2], Sebastian Cukier[2], Rachid Deriche[3], Ramon Leiguarda[2], Silvana Navarta[4], Mariano Sigman[4], Demian Wassermann[5], Bruno Wicker[6]
[1]Integrative neuroscience Laboratory, Physics Dept. University of Buenos Aires, Buenos Aires, Argentina, [2]Fundación para la Lucha contra las EnfermedadesNeurológicasdelaInfancia, Buenos Aires, Argentina, [3]INRIA Sphia Antipolis, Nice, France, [4]Integrative Neuroscience Laboratory, Physics Dept. University of Buenos Aires, Buenos Aires, Argentina, [5]Harvard Medical School, [6]INCM UMR 6193 CNRS, Université de la Méditerranée, Marseille, France

119 An fMRI Study of Selective Attention Deficits in Adult Autism Spectrum Disorder
Ryuichiro Hashimoto[1], Akira Iwanami[1], Nobumasa Kato[1], Masaru Mimura[1], Haruhisa Ohta[1], Takashi Yamada[1]
[1]Showa University School of Medicine, Tokyo, Japan

120 Whole brain analysis of white matter microstructure in autism spectrum disorders: Results from TBSS
Natalia Kleinhans[1], Todd Richards[1], Greg Pauley[1], Nathalie Martin[1], Annette Estes[1], Dennis Shaw[1], Alan Artu[1], Stephen Dager[1]
[1]University of Washington, Seattle, WA

121 Decreased empathy for facial expressions of pain in high functioning autism
Ophelie Rogier[1], Nicole Zurcher[1], Loyse Hippolyte[1], Eric Lemonnier[2], Nouchine Hadjikhani[1,3]
[1]Brain Mind Institute, EPFL, Lausanne, Switzerland, [2]CRA Bretagne, Brest, France, [3]Harvard Medical School, Boston, MA, United States

122 FMRI Brain Processing of Affectionate Touch in Children with ASD
Ilanit Gordon[1], Martha Kaiser[1], Avery Voos[1], Randi Bennett[1], Kevin Pelphrey[1]
[1]Yale Child Study Center, New Haven, CT

123 Structural correlates of self-injurious behaviours in children with an autism spectrum disorder
Emma Duerden[1], Kathleen Mak-Fan[2], S. Roberts[2], M. Mallar Chakravarty[3], Margot Taylor[1], Jason Lerch[4]
[1]Hospital for Sick Children, Toronto, Canada, [2]Hospital for Sick Children, Toronto, Ontario, [3]Rotman Research Institute/Mouse Imaging Centre, Toronto, Ontario, [4]Toronto Centre for Phenogenomics, Toronto, ON

124 Age-Related Brain Changes Related to Social Impariments in Persons with Autism Spectrum Disoders
Krissy Doyle-Thomas[1], Evdokia Anagnostou[1], Emma Duerden[2], Jin Fan[3], Latha Soorya[3], Margot Taylor[2], Ting Wang[3]
[1]Holland Bloorview Kids Rehabilitation Hospital, Toronto, Canada, [2]Hospital for Sick Children, Toronto, Canada, [3]Mount Sinai School of Medicine, New York, United States

125 Altered activation to working memory task in young subjects with ASD: A Functional MRI Study
Jukka Rahko[1], Virve Vuontela[2], Juha Nikkinen[3], Synnöve Carlson[4], Tuula Hurtig[5], Marja-Leena Mattila[5], Katja Jussila[5], Jukka Remes[6], Tuomo Starck[6], Eira Jansson-Verkasalo[7], Eeva Aronen[8], David Pauls[9], Hanna Ebeling[5], Irma Moilanen[5], Osmo Tervonen[6], Vesa Kiviniemi[6]
[1]Department of Child Psychiatry, Institute of Clinical Medicine, University and University Hospital, Oulu, Finland, [2]Neuroscience Unit, Institute of Biomedicine/Physiology, University of Helsinki, Helsinki, Finland, [3]Diagnostic Radiology, Oulu, Finland, [4]Institute of Biomedicine/Physiology, University of Helsinki, Helsinki, Finland, [5]Department of Child Psychiatry, University and University Hospital of Oulu, Oulu, Finland, [6]Department of Diagnostic Radiology, University and University Hospital of Oulu, Oulu, Finland, [7]University and University Hospital of Oulu, Neurocognitive Unit, Oulu, Finland, [8]Hospital for Women and Children, Child Psychiatry, Helsinki University Central Hospital, Helsinki, Finland, [9]Massachusetts General Hospital, Harvard Medical School, Boston, United States

126 Neural correlates of communication deficits in children with autism
Wan-Lin Hsu[1], Susan Shur-Fen Gau[2], Tai-Li Chou[3]
[1]Department of Psychology, National Taiwan University, Taipei, Taiwan, Republic of China, [2]Department of Psychiatry, National Taiwan University Hospital and College of Medicine, Taipei, Taiwan, Republic of China, [3]Dept. of Psychology, National Taiwan University, Taipei, Taiwan, Republic of China

127 Discrimination of Autistic Adults from Controls using data on Whole-Brain MRI in a Japanese Sample
Yujiro Yoshihara[1], Genichi Sugihara[2], Sean Deoni[3], Akira Ishizuka[4], Hideto Yogo[4], Kaori Matsumoto[5], Masatsugu Tsujii[5], Declan Murphy[6], Norio Mori[1], Nori Takei[5]
[1]Department of Psychiatry and Neurology, Hamamatsu University School of Medicine, Hamamatsu, Japan, [2]Hamamatsu University School of Medicine, Hamamatsu, Japan, [3]Division of Engineering, Brown University, Providence, RI, [4]Department of Radiology, Koujin Hospital, Nagoya, Japan, [5]Research Center for Child Mental Development, Hamamatsu University School of Medicine, Hamamatsu, Japan, [6]Department of Forensic and Neurodevelopmental Sciences, Institute of Psychiatry, London, United Kingdom

Disorders of the Nervous System

Developmental Disorders

128* Using resting-state fcMRI to characterize the developmental course of subjects with ADHD, (O-T1)
Damien Fair[1], Deepti Bathula[1], Joel Nigg[1], Nico Dosenbach[2], Bradley Schlaggar[2], Steven Petersen[2], Kathryn Mills[1], Taciana Costa Dias[1], Maarten Mennes[3], David Gutman[3], Saroja Bangaru[3], J.K. Buitelaar[4], Daniel Dickstein[5], David Kennedy[6], Beatriz Luna[7], Stewart Mostofsky[8], Julie Schweitzer[9], Katerina Velanova[7], Yufeng Wang[10], F. Xavier Castellanos[3], Michael Milham[3]
[1]Oregon Health & Science University, Portland, OR, [2]Washington University, St. Louis, MO, [3]Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, [4]Department of Psychiatry UMCN St. Radboud, Nijmegen, Netherlands, [5]Brown University School of Medicine, Providence, RI, [6]University of Massachusetts Medical Center, Worcester, United States, [7]University of Pittsburgh, Pittsburgh, PA, [8]Kennedy Krieger Institute, Johns Hopkins, Baltimore, United States, [9]University of California Davis School of Medicine, Sacramento, United States, [10]Institute of Mental Health, Peking University

129 Functional Connectomics in ADHD: Insights from the ADHD-200 Sample**
Maarten Mennes[1], David Gutman[1], Clare Kelly[1], Saroja Bangaru[1], Xi-Nian Zuo[2,1], Yu-Feng Zang[3], Yu-Feng Wang[4], Katerina Velanova[5], Julie Schweitzer[6], Joel Nigg[7], Stewart Mostofsky[8], Beatriz Luna[5], David Kennedy[9], Damien Fair[7], Daniel Dickstein[10], J.K. Buitelaar[11], F Xavier Castellanos[1,12], Michael Milham[1,12]
[1]Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, United States, [2]Institute of Psychology, Chinese Academy of Sciences, Beijing, China, [3]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, [4]Institute of Mental Health, Peking University, [5]University of Pittsburgh, Pittsburgh, United States, [6]University of California Davis School of Medicine, Sacramento, United States, [7]Oregon Health & Science University, Oregon, United States, [8]Kennedy Krieger Institute, Johns Hopkins, Baltimore, United States, [9]University of Massachusetts Medical Center, Worcester, United States, [10]Brown University School of Medicine, Providence, United States, [11]Department of Psychiatry UMCN St. Radboud, Nijmegen, Netherlands, [12]Nathan S. Kline Institute for Psychiatric Research, Orangeburg, United States

130 Morphological and neurocognitive sequelae following chemotherapy for leukemia in early childhood
Thomas Hübner[1], Nasreddin Abolmaali[1], Marina Genschaft[1], Thomas Hummel[1], Vasiliki Ikonomidou[2], Chrysanthy Ikonomidou[3], Clemens Kirschbaum[1], Franziska Krone[1], Franziska Plessow[1], Meinolf Suttorp[1], Michael Smolka[1]
[1]Technische Universität Dresden, Dresden, Germany, [2]George Mason University, Fairfax, VA, [3]University of Wisconsin, Madison, WI

131 Persistent changes of cerebrovascular dynamics associated with prolonged high altitude residence
Xiaodan Yan[1,2], Jiaxing Zhang[1,3], Qiyong Gong[4], Xuchu Weng[1]
[1]Chinese Academy of Sciences, Beijing, China, [2]Rensselaer Polytechnic Institute, Troy, United States, [3]Xiamen Unviersity, Xiamen, China, [4]Sichuan University, Chengdu, China

132 Perinatal biomarkers of adverse neuropsychological outcome in preterm newborns
MASSIMO CAULO[1], Carlo Sestieri[1], RICCARDO NAVARRA[1], Mauro Gianni Perrucci[1], CHIARA BRIGANTI[1], EMANUELA CONTE[2], RITA SALOMONE[2], SERGIO DOMIZIO[2], Gian Luca Romani[1]
[1]DEPARTMENT OF NEUROSCIENCE AND IMAGING, Chieti, Italy, [2]NEONATAL INTENSIVE CARE UNIT, Chieti, Italy

133 A robust index of lateralized brain function in typically and atypically developing children
Blake Johnson[1], Genevieve McArthur[1], Melanie Reid[1], Jon Brock[1], Stephen Crain[1]
[1]Macquarie University, Sydney, Australia

134 Regional Patterns of Striatal Morphology in Adolescents with Prenatal Cocaine Exposure
Florence Roussotte[1], Lindsay Soderberg[1], Tamara Warner[2], Katherine Narr[1], Marylou Behnke[3], Fonda Davis Eyler[3], Elizabeth Sowell[1]
[1]University of California, Los Angeles, Los Angeles, CA, [2]East Carolina University, Greenville, NC, [3]University of Florida, Gainesville, FL

135 Synchronous EEG-fMRI reveals timing deficits in ADHD during behavioral inhibition in a Go/no-go task
Alexandra Sebastian[1], Bernd Feige[1], Lena Schmüser[1], Stefan Klöppel[1], Klaus Lieb[2], Oliver Tüscher[1,2]
[1]Albert-Ludwigs-University, Department of Psychiatry and Psychotherapy, Freiburg, Germany, [2]Johannes-Gutenberg-University, Department of Psychiatry and Psychotherapy, Mainz, Germany

136 Meta-analyzing brain dysfunctions in dyslexic children and adults
Fabio Richlan[1], Martin Kronbichler[1], Heinz Wimmer[1]
[1]University of Salzburg, Salzburg, Austria

137 Functional connectivity patterns during working memory in drug naive children with ADHD
Philippe PEIGNEUX[1], Hichem SLAMA[1], Sylvie Linotte[2], Alison MARY[1], Martin KAVECS[3], Thierry METENS[3], Danielle BALERIAUX[3], Isabelle MASSAT[1,4,5]
[1]UR2NF - Neuropsychology and Functional Neuroimaging Research Unit, ULB, Bruxelles, Belgium, [2]Laboratory of Psychological Medicine, ULB, Bruxelles, Belgium, [3]Department of Radiology,Clinics of Magnetic Resonance, Hôpital Erasme, ULB, Bruxelles, Belgium, [4]Laboratory of Experimental neurology, ULB, Bruxelles, Belgium, [5]Senior Research Associate at FRS-FNRS, Bruxelles, Belgium

138 Imaging the Where and When of Tic Generation in Tourette's Syndrome
Irene Neuner[1,2], Cornelius Werner[3], Tony Stöcker[2], Thilo Kellermann[3], Jessica Bath[3], Hans Wegener[2], Frank Schneider[3], N Shah[2]
[1]RWTH Aachen, Germany, [2]Forschungszentrum Jülich, Jülich, Germany, [3]RWTH Aachen, Aachen, Germany

139 Reduced functional connectivity of the left occipito-temporal cortex in developmental dyslexia
Matthias Schurz[1], Fabio Richlan[1], Martin Kronbichler[1], Heinz Wimmer[1]
[1]University of Salzburg, Salzburg, Austria

140 Statistical shape analysis of atrophy of subcortical structures in prodromal Huntington's Disease
Laurent Younes[1], Tilak Ratnanather[1], Roger Albin[2], Timothy Brown[1], Elizabeth Aylward[3], Peg Nopoulos[4], Ronald Pierson[4], Hans Johnson[4], Vincent Magnotta[4], Jane Paulsen[4], Russell Margolis[5], Michael Miller[1], Chris Ross[5]
[1]Johns Hopkins University, Baltimore, MD, [2]University of Michigan, Ann Arbor, MI, [3]Seattle Children's Research Institute, Seattle, United States, [4]University of Iowa, Iowa City, IA, [5]Johns Hopkins University School of Medicine, Baltimore, MD

141 Longitudinal Brain Development in Fetal Alcohol Spectrum Disorders
Sarah Treit[1], Catherine Lebel[2], Carmen Rasmussen[3], Gail Andrew[4], Christian Beaulieu[2]
[1]Centre for Neuroscience, University of Alberta, Edmonton, Alberta, Canada, [2]Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada, [3]Department of Pediatrics, University of Alberta, Edmonton, Alberta, Canada, [4]FASD Clinic, Glenrose Rehabilitation Hospital, Edmonton, Alberta, Canada

142 An MEG study of dichotic pitch in children with autism spectrum disorder
Jon Brock[1], Blake Johnson[1], Melanie Reid[1], Samantha Bzishvili[1], Caroline Witton[2]
[1]Macquarie University, Sydney, Australia, [2]Aston University, Birmingham, United Kingdom

143 Withdrawn

144 Atypical Patterns of Activity and Connectivity Associated with Mirror Overflow in Children with ADHD
Andrew Gaddis[1], Deana Crocetti[1], Lindsey MacNeil[1], Anita Barber[2], John Muschelli[2], Suresh Joel[3], James Pekar[2], Stewart Mostofsky[4]
[1]Kennedy Krieger Institute, Baltimore, MD, [2]Johns Hopkins University, Baltimore, MD, [3]Johns Hopkins University, [4]Kennedy Krieger Institute, Johns Hopkins, Baltimore, United States

145 A Study of Cortical Folding in Children with Fetal Alcohol Syndrome
François De Guio[1], jean-francois mangin[1], Christopher Molteno[2], Sandra Jacobson[3], Joseph Jacobson[3], Ernesta Meintjes[4]
[1]LNAO/Neurospin/I2BM/CEA, Saclay, France, [2]Department of Psychiatry, University of Cape Town, Cape Town, South Africa, [3]Department of Psychiatry and Behavioral Neurosciences, Wayne State University School of Medicine, Michigan, United States, [4]MRC/UCT Medical Imaging Research Unit, University of Cape Town, Cape Town, South Africa

146 Callosal Thickness Reductions relate to Facial Dysmorphology in Fetal Alcohol Spectrum Disorders
Yaling Yang[1], Colleen Adnams[2], Kenneth Jones[3], Sarah Mattson[4], Philip May[5], Mary O'Connor[6], Edward Riley[4], Kathleen Sulik[7], Eric Kan[8], Owen Phillips[9], Katherine Narr[9], Elizabeth Sowell[10]
[1]Developmental Cognitive Neuroimaging Laboratory, UCLA School of Medicine, Los Angeles, CA, [2]University of Cape Town, Cape Town, South Africa, [3]University of California San Diego, San Diego, CA, [4]San Diego State University, San Diego, CA, [5]The University of New Mexico, Albuguerque, NM, [6]University of California Los Angeles, Los Angeles, CA, [7]University of North Carolina, Chapel Hill, Chapel Hill, NC, [8]Developmental Cognitive Neuroimaging Laboratory, UCLA School of Medicine, Los Angeles, United States, [9]UCLA, Los Angeles, CA, [10]UCLA Department of Neurology, Los Angeles, United States

147 The effect of external auditory pacemaker on the neural activity of stuttering speakers
Akira Toyomura[1], Tetsunoshin Fujii[2], Shinya Kuriki[3]
[1]Tokyo Denki University, [2]Hokkaido University, Sapporo, Japan, [3]Tokyo Denki University, Chiba, Japan

148 Cortical thickness differences between dyslexic and normal readers in occipito-temporal regions
Irene Altarelli[1], Karla Monzalvo[2], Joel Fluss[3], Catherine Billard[3], Ghislaine Dehaene-Lambertz[2], Franck Ramus[1]
[1]Laboratoire de Sciences Cognitives et Psycholinguistique, Ecole Normale Supérieure, Paris, France, [2]INSERM-CEA Cognitive Neuroimaging Unit, GIF/YVETTE, France, [3]Centre de Référence pour les Troubles des Apprentissages, Hôpital Bicêtre, Kremlin-Bicêtre, France

149 Dyslexic Children Lack a Gradient of Word Specificity in Left Inferior Temporal and Frontal Cortices
Olumide Olulade[1], Lynn Flowers[2], Eileen Napoliello[3], Guinevere Eden[3]
[1]Center for the Study of Learning, Georgetown University Medical Center, Washington, D.C., USA, [2]Center for the Study of Learning, Georgetown University Medical Center, Washington, DC, USA, [3]Center for the Study of Learning, Georgetown University Medical Center, Washington, DC

150 Delayed development of cortical surfaces and gyrification in ADHD
Philip Shaw[1], Alan Evans[1], Jay Giedd[1], Judith Rapoport[1], Wendy Sharp[1]
[1]NIMH, Bethesda, DC

151 The association between altered white matter and motor function in Klinefelter's syndrome
Maki Kasahara[1], Tie-Qiang Li[2], Ivanka Savic[1]
[1]Dept of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden, [2]Karolinska Hospital, Huddinge, Sweden

152 Motor Performance - Functional Connectivity Relationship Differs in Children with ADHD and HFA
Suresh Joel[1,2], Anita Barber[1,2], Mary Beth Nebel[1,2], Brian Caffo[1], James Pekar[1,2], Stewart Mostofsky[1,2]
[1]Johns Hopkins University, Baltimore, United States, [2]Kennedy Krieger Institute, Baltimore, United States

153 Reduced Gamma Activity during Time Perception in Unmedicated Adults with ADHD: A Pharmaco-MEG Study
Tony W Wilson[1,2,3], Martin Wetzel[4], Matthew White[5], John Franzen[4], Nichole Knott[2]
[1]Department of Pharmacology & Experimental Neuroscience, University of Nebraska Medical Center, Omaha, NE, [2]Center for Magnetoencephalography, University of Nebraska Medical Center, Omaha, NE, [3]Munroe-Meyer Institute for Genetics and Rehabilitation, University of Nebraska Medical Center, Omaha, NE, [4]Department of Psychiatry, University of Nebraska Medical Center, Omaha, NE, [5]Department of Radiology, University of Nebraska Medical Center, Omaha, NE

154 ICA of resting-state fMRI reveals diminished functional connectivity in callosal dysgenesis
Yiou Li[1], Fan-Pei Yang[1], Charvi Shetty[1], Sandya Venugopal[1], Polina Bukhpun[1], Mari Wakahiro[1], Elliot Sherr[1], Pratik Mukherjee[1]
[1]University of California San Francisco, San Francisco, United States

155 FUNCTIONAL ORGANIZATION OF THE PRIMARY MOTOR CORTEX IN CONGENITAL AND CHRONIC AQUIRED PARAPLEGIA
Christoph Stippich[1], Magdalini Tozakidou[2], Maria Blatow[2], Michael Akbar[3]
[1]Dept of Neuroradiology, University hospital Basle, Switzerland, [2]Dept of Neuroradiology, University hospital Basle, Switzerland, Basle, Switzerland, [3]Dept of Orthopedic Surgery, University of Heidelberg, Germany, Heidelberg, Germany

156 Reduced cortico-cerebellar activation during fMRI finger tapping task in ADHD
Jadwiga Rogowska[1], Melissa Lopez-Larson[2], Deborah Yurgelun-Todd[2]
[1]Brain Imaging Center, McLean Hospital/Harvard Medical School, Belmont, MA, [2]The Brain Institute, University of Utah, Salt Lake City, UT

157 Differential recruitment of working memory regions in children with fetal alcohol spectrum disorder
Vaibhav Diwadkar[1], Dhruman Goradia[2], Neil Dodge[2], Christopher Warton[3], Christopher Molteno[4], Sandra Jacobson[5], Joseph Jacobson[5], Ernesta Meintjes[6]
[1]Wayne State University School of Medicine, Detroit, MI, [2]Wayne State University SOM, Detroit, MI, [3]University of Cape Town, Cape Town, South Africa, [4]Department of Psychiatry, University of Cape Town, Cape Town, South Africa, [5]Department of Psychiatry and Behavioral Neurosciences, Wayne State University School of Medicine, Michigan, United States, [6]MRC/UCT Medical Imaging Research Unit, University of Cape Town, Cape Town, South Africa

158 Integration of dimensional and categorical analyses of brain-behavior relationships in adhd children
Camille Chabernaud[1], Maarten Mennes[1], Clare Kelly[1], Kate Nooner[2], Adriana Di Martino[1], F. Xavier Castellanos[1], Michael Milham[1]
[1]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, United States, [2]Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY

159 ADHD and the Default-Mode Network: The Effect of Stimulant Medication on Functional Connectivity
John Franzen[1], Matthew White[2], Martin Wetzel[3], Nichole Knott[4], Tony Wilson[4,5,6]
[1]Department of Psychiatry, University of Nebraska/ Creighton Medical Center, Omaha, NE, [2]Department of Radiology, University of Nebraska Medical Center, Omaha, NE, [3]Department of Psychiatry, University of Nebraska Medical Center, Omaha, NE, [4]Center for Magnetoencephalography, Omaha, NE, [5]Munroe-Meyer Institute for Genetics and Rehabilitation, Omaha, NE, [6]Department of Pharmacology and Experimental Neuroscience, Omaha, NE

160 Multi-modal imaging (DTI and MRS) of the basal ganglia in fragile X syndrome
Elizabeth Walter[1], Amy Lightbody[1], Allan Reiss[1]
[1]Stanford University, Stanford, CA

161 Neural hypersensitivity to rewards is associated with combined type ADHD and moderated by DAT1
Yannis Paloyelis[1], Mitul Mehta[1], Stephen Faraone[2], Philip Asherson[1], Jonna Kuntsi[1]
[1]KING'S COLLEGE LONDON, London, United Kingdom, [2]Department of Psychiatry, Harvard Medical School, Massachusetts General Hospital, Boston, MA

162 Reward circuit connectivity relates to delay discounting in children with ADHD
Taciana Costa Dias[1], Erica Musser[2], Vanessa Wilson[2], Deepti Bathula[2], Kathryn Mills[2], Bria Thurlow[2], Corinne Stevens[2], Suzanne Mitchell[2], Joel Nigg[2], Damien Fair[2]
[1]Oregon Health & Science University, Portland OR, [2]Oregon Health & Science University, Portland, OR

163 Parietal Activation in ADHD during Verbal Working Memory is Predictive of Reading Comprehension
John Muschelli[1], E. Mark Mahone[2], Andrew Gaddis[3], Anita Barber[1], Suresh Joel[4], Stewart Mostofsky[5]
[1]Johns Hopkins University, Baltimore, MD, [2]The Kennedy Krieger Institute, Baltimore, MD, [3]Kennedy Krieger Institute, Baltimore, MD, [4]Johns Hopkins University, [5]Kennedy Krieger Institute, Johns Hopkins, Baltimore, United States

164 Cognition and Lobar Morphology in Full Mutation Children with Fragile X Syndrome
Cherine Fahim[1], Nagwa Meguid[2], rasha Samy[2], Uicheul Yoon[3], Adham Mancini-Marie[4], Richard Frackowiak[5], Alan Evans[6]
[1]University of Lausanne, Lausanne, Switzerland, [2]National Research Centre, Cairo, Egypt, [3]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [4]6. Department of Psychiatry, Hôpitaux Universitaires de Genève HUG, University of Geneva, Geneva, Switzerland, [5]Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland, [6]McGill University, Montreal, Canada

165 Alterations in age-related cortico-striatal responses in ADHD children during attention and memory
Vaibhav Diwadkar[1], Jacqueline Radwan[2], Mahya Mashhadi[3], Dalal Khatib[2], McGarragle Olivia[2], Patrick Pruitt[4], Arthur Robin[2], David Rosenberg[2], Jeffrey Stanley[5]
[1]Wayne State University School of Medicine, Detroit, MI, [2]Wayne State University SOM, Detroit, MI, [3]Eastern Michigan University, Ypsi Lanti, MI, [4]University of Michigan, Ann Arbor, MI, [5]Wayne State University School of Medicine, Detroit, United States

166 AMRI & DTI of deep gray matter structures in children with and without spina bifida meningomyelocele
Jenifer Juranek[1], Victoria Williams[2], Paul Cirino[2], Maureen Dennis[3], Jack Fletcher[2]
[1]UTHSC-Houston, Houston, TX, [2]UH, Houston, TX, [3]Hospital for Sick Children, Toronto, Ontario

167 FMRI of Letter and Face Identification in Pediatric Survivors of Medulloblastoma
Ping Z. Stinnett[1], Melissa Jones[1], Matthew Scoggin[1], Samina Taherbhoy[1], Carlos Parra[1], Shawna Palmer[1], Heather Conklin[1], Thomas Merchant[1], Amar Gajjar[1], Robert J. Ogg[1]
[1]St. Jude Children's Research Hospital, Memphis, TN, United States

168 FMRI Evidence for Spatial Visualization Differences in Dyslexic Individuals
Olumide Olulade[1,2], Jeffrey Gilger[2], Thomas Talavage[2], George Hynd[3], Carole McAteer[4]
[1]Center for the Study of Learning, Georgetown University Medical Center, Washington, D.C., United States, [2]Purdue University, West Lafayette, IN, United States, [3]College of Charleston, Charleston, SC, United States, [4]University of Tennessee, Knoxville, TN, United States

169 The Impact of Prenatal Exposure to Cocaine and Tobacco on Brain Morphometry and Sensation Seeking
JIE LIU[1], Barry Kosofsky[2], Minal Kekatpure[3], Stephen Sheinkopf[4], Jennifer Gench[4], Barry Lester[4]
[1]Brown University, Providence, RI, [2]WeillCornell Medical College, New York, United States, [3]Weill Cornell Medical College, Cornell University, New York, NY, [4]Brown Center for the Study of Children at Risk, Brown Univeristy, Providence, RI

170 Functional-anatomic correlates of controlled processing in adult ADHD: Impairment and IQ
Katerina Velanova[1], Amelia Versace[1], Cecile Ladouceur[1], Beatriz Luna[1], Brooke Molina[1]
[1]University of Pittsburgh, Pittsburgh, USA

171 Diffusion Tensor Imaging of Adolescents with Prenatal Cocaine Exposure
Catherine Lebel[1], Tamara Warner[2], Florence Roussotte[1], Marylou Behnke[3], Fonda Davis Eyler[3], Elizabeth Sowell[1]
[1]UCLA, Los Angeles, CA, [2]East Carolina University, Greenville, NC, [3]University of Florida, Gainesville, FL

172 Prenatal Methamphetamine is Associated with Reduced Caudate Volumes and Longer Processing Speed
Chris Derauf[1], James Davis[2], Barry Kosofsky[3], Barry Lester[4]
[1]Mayo Clinic, Rochester, MN, [2]University of Hawaii, Honolulu, HI, [3]Weill Cornell Medical College, New York, NY, [4]Brown Center for the Study of Children at Risk, Brown Univeristy, Providence, RI

173 Reduced Brain Fractional Anisotropy at 33-Year Follow-Up in Adults with childhood ADHD
Samuele Cortese[1], Davide Imperati[1], Erika Proal[1], Salvatore Mannuzza[2], Rachel Klein[2], Kristin Gotimer[1], Michael Milham[1], F. Xavier Castellanos[1]
[1]Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, [2]Anita Saltz Institute for Anxiety and Mood Disorders, NYU Langone Medical Center, New York, NY

Disorders of the Nervous System

Epilepsy

174* Distinct Patterns of Brain Abnormalities in Different Idiopathic Generalized Epilepsy Syndromes, (O-Th1)
Min Liu[1], Luis Concha[2], Christian Beaulieu[3], Donald Gross[4]
[1]University of Alberta, Edmonton, Alberta, [2]Universidad Nacional Autonoma de Mexico, Queretaro, QRO, [3]Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, [4]University of Alberta, Edmonton, Canada

175* Epilepsy: multifocality is based on pathological increased connectivity in the default mode network, (O-M3)
Jan Moehring[1], Bianca Kroeher[2], Andreas Galka[2], Friederike Moeller[2], Laith Hamid[2], Stephan Wolff[3], Jansen Olaf[3], Rainer Boor[4], Ulrich Stephani[2], Michael Siniatchkin[2]
[1]University of Kiel, Kiel, Germany, [2]Clinic for Neuropaediatrics, UK-SH Kiel, Kiel, Germany, [3]Department of Neuroradiology, Christian-Albrechts-University, Kiel, Germany, [4]Northern German Epilepsy Center for Children and Adolescents, Raisdrof, Germany

176 Activelets decomposition and sparse representation of epileptic activity in fMRI**
Renaud Lopes[1], Jean-Marc Lina[2], Jean Gotman[1]
[1]Montreal Neurological Institute and Hospital, McGill University, Montreal, Canada, [2]Ecole de technologie supérieure (ETS) de l'université du Québec, Montreal, Canada

177 Functional Activation Patterns in Hippocampal Subfields in Temporal Lobe Epilepsy**
Sandhitsu Das[1], Dawn Mechanic-Hamilton[2], Marc Korczykowski[2], John Pluta[1], John Detre[2], Paul Yushkevich[1]
[1]Penn Image Computing and Science Laboratory, Department of Radiology, University of Pennsylvania, Philadelphia, USA, [2]Center for Functional Neuroimaging, Department of Neurology, University of Pennsylvania, Philadelphia, USA

178* Longitudinal Changes in White Matter and Language Outcome After Anterior Temporal Lobe Resection, (O-Th1)
Mahinda Yogarajah[1], Silvia Bonelli[1], Niels Focke[2], Pam Thompson[1], Mark Symms[1], Matthias Koepp[1], John Duncan[1]
[1]UCL Institute of Neurology, London, United Kingdom, [2]Dept. of Clinical Neurophysiology, Georg August University, Goettingen, Germany

179 Preoperative EEG-correlated fMRI Analyses with Electrocorticographic Validation**
Petra van Houdt[1,2], Pauly Ossenblok[1], Frans Leijten[3], Geertjan Huiskamp[3], Albert Colon[1], Paul Boon[1], Kees Stam[2], Jan De Munck[2]
[1]Kempenhaeghe, Heeze, Netherlands, [2]VU University Medical Center, Amsterdam, Netherlands, [3]University Medical Center Utrecht, Utrecht, Netherlands

180 A Multimodal Analysis of Thalamocortical Dysfunction in Juvenile Myoclonic Epilepsy**
Jonathan O'Muircheartaigh[1], Christian Vollmar[2], Gareth Barker[1], Veena Kumari[1], Mark Symms[2], Pam Thompson[2], John Duncan[2], Matthias Koepp[2], Mark Richardson[1]
[1]King's College London, Institute of Psychiatry, London, United Kingdom, [2]University College London, Institute of Neurology, London, United Kingdom

181 Functional Connectivity in Patients with Generalized Epilepsy**
Mona Maneshi[1], Friederike Moeller[1,2], Jean Gotman[1], Christophe Grova[3,1]
[1]Montreal Neurological Institute and Hospital, McGill University, Montreal, Canada, [2]Department of Neuropediatrics, Christian-Albrechts-University, Kiel, Germany, [3]Biomedical Engineering Department, McGill University, Montreal, Canada

182 Graph-theoretical analysis of cortical thickness correlations in temporal lobe epilepsy
Boris Bernhardt[1], Seok Jun Hong[1], Zhang Chen[2], Yong He[3,2], Alan Evans[2], Neda Bernasconi[1]
[1]Neuroimaging of Epilepsy Laboratory, Montreal Neurological Institute, McGill University, Montreal, QC, Canada, [2]Brain Imaging Center, Montreal Neurological Institute, McGill University, Montreal, QC, Canada, [3]Beijing Normal University, Beijing, China

183 MEG source localization of interictal bursts of epileptic activity in time frequency domain
Michelle-Lee Jones[1], Ana Chrystina Crippa[1], Jean-Marc Lina[2], Christophe Grova[3], Eliane kobayashi[1]
[1]Montreal Neurological Institute, McGill University, Montreal, Canada, [2]Electrical Engineering Department, Ecole de Technologie Supérieure, Montreal, Canada, [3]Montreal Neurological Institute and Biomedical Engineering Department, McGill University, Montreal, Canada

184 Loss of white matter network organization is associated with cognitive decline in chronic epilepsy
Maarten Vaessen[1,2,3], Jaap Jansen[1,2], Marielle Vlooswijk[2,4], Paul Hofman[1,2], Marjan Majoie[3,4], Albert Aldenkamp[2,3,4], Walter Backes[1,2]
[1]Radiology, Maastricht University Medical Centre, Maastricht, Netherlands, [2]School for Mental Health and Neurosciences, Maastricht University, Maastricht, Netherlands, [3]Kempenhaeghe Epilepsy Center, Heeze, Netherlands, [4]Neurology, Maastricht University Medical Centre, Maastricht, Netherlands

185 EEG-fMRI and ESI in epilepsy surgery
Lydia Elshoff[1], Kristina Groening[2], Frederic Grouiller[3], Christoph Michel[4], Ulrich Stephani[5], Michael Siniatchkin[6]
[1]Clinic for Neuropaediatrics, Uk-SH Kiel, Germany, [2]Clinic for Neuropaediatrics, Uk-SH Kiel, Germany, Kiel, Germany, [3]University Hospital and Faculty of Medicine, Geneva, Switzerland, [4]University Hospital, Geneva, Switzerland, [5]Clinic for Neuropaediatrics, UK-SH Kiel, Kiel, Germany, [6]University Hospital, Kiel, Germany

186 Remote effects of mesial temporal lobe seizures studied by EEG-fNIRS
Julie Tremblay[1], Philippe Pouliot[2], Phetsamone Vannasing[3], Olivia Florea[3], Frédéric Lesage[4], Franco Lepore[5], Maryse Lassonde[5], Dang Khoa Nguyen[6]
[1]Hôpital Sainte-Justine, Montreal, Canada, [2]École Polytechnique, Université de Montréal, Montreal, Québec, [3]Hôpital Sainte-Justine , Université de Montréal, Montreal, Canada, [4]École Polytechnique,Université de Montréal, Montreal, Canada, [5]Cernec, Université de Montréal, Montreal, Canada, [6]CHUM Notre-Dame,Université de Montréal, Montreal, Quebec

187 Voxel-based statistical analysis of fractional anisotropy in mesial temporal lobe epilepsy
Simon Keller[1], Michael Deppe[2], Jan-Christoph Schöne-Bake[3], Siawoosh Mohammadi[4], Bernd Weber[3]
[1]University of Münster, Department of Neurology, Münster, Germany, [2]Department of Neurology, University of Münster, Münster, Germany, [3]Department of Epileptology, University of Bonn, Bonn, Germany, [4]Wellcome Trust Centre for Neuroimaging, London, United Kingdom

188 DTI and MRI determined putamen abnormalities in the temporal lobe and juvenile myoclonic epilepsies
Harald Kugel[1], Simon Keller[2], Tobias Ahrens[2], Siawoosh Mohammadi[3], Gabriel Möddel[2], E Ringelstein[2], Michael Deppe[2]
[1]Dept. of Clinical Radiology, University of Muenster, Münster, Germany, [2]Department of Neurology, University of Münster, Münster, Germany, [3]Wellcome Trust Centre for Neuroimaging, London, United Kingdom

189 The Effect of Epileptic Discharges on the EEG of the Default Mode Network
Firas Fahoum[1], Rina Zelmann[1], Jeffery Hall[1], François Dubeau[1], Jean Gotman[1]
[1]Montreal Neurological Institute, Montreal, Quebec, Canada

190 Cerebral and Cerebellar Language Lateralization in Pediatric Epilepsy Surgery Candidates
Jennifer Gelinas[1], Kevin Fitzpatrick[2], Danny Kim[2], Sare Akdag[3], Mary Connolly[1], Bruce Bjornson[4]
[1]Division of Neurology, Department of Pediatrics, The University of British Columbia, Vancouver, British Columbia, [2]Brain Mapping Centre, British Columbia Children's Hospital, Vancouver, British Columbia, [3]Department of Psychology, British Columbia Children's Hospital, Vancouver, British Columbia, [4]Developmental Neurosciences & Child Health, Child & Family Research Institute, UBC, Vancouver, British Columbia

191 White Matter Abnormalities in Temporal Lobe Epilepsy with and without Mesial Temporal Sclerosis
Min Liu[1], Luis Concha[2], Catherine Lebel[3], Donald Gross[4], Christian Beaulieu[5]
[1]University of Alberta, Edmonton, Alberta, Canada, [2]Universidad Nacional Autonoma de MexicoUniversity of Alberta, Queretaro, Mexico, [3]University of California - Los Angeles, Los Angeles, CA, [4]University of Alberta, Edmonton, Canada, [5]University of Alberta, Edmonton, Alberta

192 Anatomical correlation between magnetoencephalography and intracranial EEG recordings
Maria Aiguabella[1], Christophe Grova[1,2], Masoud Sangani[1], Dominique Rosenberg[1], Rina Zelmann[1], Jeffery Hall[1], Jean Gotman[1], François Dubeau[1], Eliane kobayashi[1]
[1]Montreal Neurological Institute, McGill University, Montreal, Canada, [2]Biomedical Engineering Dpt, McGill University, Montreal, Canada

193 Abnormal Functional Connectivity between Areas involved in Emotion and Executive Control in PNES
Sylvie van der Kruijs[1], Nynke Bodde[1], Maarten Vaessen[2], Richard Lazeron[1], Paul Hofman[2], Walter Backes[2], Albert Aldenkamp[1], Jaap Jansen[2]
[1]Epilepsy Center Kempenhaeghe, Heeze, Netherlands, [2]Radiology, Maastricht University Medical Center, Maastricht, Netherlands

194 How robust are haemodynamic responses observed prior to interictal epileptiform discharges?
David Rollings[1], Dirk Ostwald[2], Camillo Porcaro[1], Doug McCorry[3], Imad Soryal[3], Manny Bagary[4], Andrew Bagshaw[1]
[1]University of Birmingham, Birmingham, United Kingdom, [2]Bernstein Centre Berlin, Berlin, Germany, [3]Department of Neuroscience, University Hospital Birmingham, Birmingham, United Kingdom, [4]The Barberry, Birmingham & Solihull Mental Health Trust, Birmingham, United Kingdom

195 Memory lateralization and performance in epilepsy patients
Cristina Bigras[1], Jane Allendorfer[1], Jennifer Vannest[2], Bruce Schefft[1], Jerzy Szaflarski[1]
[1]University of Cincinnati, Cincinnati, United States, [2]Cincinnati Children's Hospital Medical Center, Cincinnati, OH

196 Atypical neural circuitry for language in children with Benign Epilepsy with Centro-Temporal Spikes
Jennifer Vannest[1], Kenneth Eaton[2], David Henkel[1], Jerzy Szaflarski[3,1], Tracy Glauser[4], Diego Morita[4], Vincent Schmithorst[1], Anna Byars[4], Scott Holland[1]
[1]Pediatric Neuroimaging Research Consortium, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [2]Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [3]University of Cincinnati Academic Health Center, Cincinnati, OH, [4]Division of Neurology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH

197 The Default Mode Network in Mesial Temporal Lobe Epilepsy Using Seed-Voxel Correlation Analysis
PIN YU CHEN[1,2], H H Liou[3,4], K C Chu[2,5], W M Huang[3], WY I Tseng[2,6]
[1]Neurobiology and Cognitive Science Center, National Taiwan University, Taipei, Taiwan, Republic of China, [2]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [3]Graduate Institute of Pharmacology, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [4]Department of Neurology, National Taiwan University Hospital, Taipei, Taiwan, Republic of China, [5]Institute of Electrical Engineering, National Taiwan University, Taipei, Taiwan, Republic of China, [6]Department of Medical Imaging, National Taiwan University Hospital, Taipei, Taiwan, Republic of China

198 Towards delineation of the source volume of interictal spikes in focal epilepsy using MEG
Romain Bouet[1,2,3], Julien Jung[1,2,3], Claude Delpuech[1,2,4], Philippe Ryvlin[5,2,3], Jean Isnard[6,7], Marc Guenot[3,7], Olivier Bertrand[1,2], François Mauguière[3,7]
[1]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Brain Dynamics and Cognition Team, Lyon, France, [2]University Lyon 1, Lyon, France, [3]Neurological Hospital, Functional Neurology and Epileptology Dept, Lyon, France, [4]CERMEP - imagerie du vivant, Bron, Bron, France, [5]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Translational and Integrative Group i, Lyon, France, [6]) Neurological Hospital, Functional Neurology and Epileptology Dept, Lyon, France, [7]INSERM U879, Lyon, France

199 Disrupted functional connectivity is associated with cognitive decline in cryptogenic epilepsy
Maarten Vaessen[1,2,3], Marielle Vlooswijk[4,2], Jaap Jansen[1,2], Marc de Krom[4], Marjan Majoie[4,3], Paul Hofman[1,2], Albert Aldenkamp[3,4,2], Walter Backes[1,2]
[1]Radiology, Maastricht University Medical Centre, Maastricht, Netherlands, [2]School for Mental Health and Neurosciences, Maastricht University, Maastricht, Netherlands, [3]Kempenhaeghe Epilepsy Center, Heeze, Netherlands, [4]Neurology, Maastricht University Medical Centre, Maastricht, Netherlands

200 Neuronal networks in West-syndrome as revealed by source analysis and partial directed coherence
Natia Japaridze[1], Muthuraman Muthuraman[2], Friederike Möller[3], Rainer Boor[4], Urlich Stephani[5], Günther Deuschl[6], Jan Raethjen[2], Michael Siniatchkin[3]
[1]Department of Neuropediatrics University Medical Center Schleswig-Holstein (UKSH), Kiel, Germany, [2]Department of Neurology, Christian-Albrechts-University, Kiel, Germany, [3]Department of Neuropediatrics, Christian-Albrechts-University, Kiel, Germany, [4]North German Epilepsy Center for Children and Adolescents, Department of Neuropediatrics, Christian-, Raisdrof, Germany, [5]Department of Neuropediatrics, Christian-Albrechts-University, North German Epilepsy Center for Chil, Kiel , Germany, [6]Department of Neurology, Christian-Albrechts-University, Kiel , Germany

201 MRI-Based Cortical Thickness Analysis in Drug-Resistant Cryptogenic Epilepsy
SeokJun Hong[1], Boris Bernhardt[1], Hosung Kim[1], Neda Bernasconi[1], Andrea Bernasconi[1]
[1]Neuroimaging of Epilepsy Laboratory, Montreal Neurological Institute, Montreal, QC

202 FMRI functional connectivity study in Mesial Temporal Lobe Epilepsy
Francesca Pittau[1], Christophe Grova[2], Friederike Moeller[1], François Dubeau[1], Jean Gotman[1]
[1]Montreal Neurological Institute, McGill University, Montreal, Canada, [2]Biomedical Engineering Department, McGill University, Montreal, Canada

203 Pre- and post-op activation of the motor cortex in epilepsy with hemiparesis and rolandic ischemia
Andre Palmini[1], Jaderson Costa da Costa[2], João Rubião Hoefel[3], Rafael Nunes[3], Eliseu Paglioli[4]
[1]Instituto do Cerebro - PUCRS - Brazil, [2]Instituto do Cerebro - InsCer - PUCRS, Porto Alegre, RS, [3]Centro Diagnóstico Imagem - PUCRS, Porto Alegre, RS, [4]Serviço Neurocirurgia - PUCRS, Porto Alegre, RS

204 Can EEG-correlated functional MRI guide the implantation of depth electrodes?
Petra van Houdt[1,2], Pauly Ossenblok[1], Albert Colon[1], Paul Boon[1], Kees Stam[2], Jan De Munck[2]
[1]Kempenhaeghe, Heeze, Netherlands, [2]VU University Medical Center, Amsterdam, Netherlands

205 Investigation by MEG of networks involved in interictal epileptiform discharges
Urszula Malinowska[1], Jean-Michel Badier[1], Martine Gavaret[1], Fabrice Bartolomei[1], Patrick Chauvel[1], Christian Bénar[1]
[1]INSERM, Université de la Méditerranée, Epilepsy and Cognition laboratory UMR 751, Marseille, France

206 DTI, cortical thickness and memory in pediatric epilepsy
Helen Carlson[1], Elisabeth Sherman[1,2], Ismael Gaxiola-Valdez[2,3], Christian Beaulieu[4], Xing-Chang Wei[1,2], Walter Hader[1,2,5], Luis Bello-Espinosa[1,2], Adam Kirton[1,2], Karen Barlow[1,2], Brian Brooks[1,2], Sam Wiebe[5,2], Ismail Mohamed[6]
[1]Alberta Children's Hospital, Calgary, Canada, [2]University of Calgary, Calgary, Canada, [3]Seaman Family MR Research Centre, Calgary, Canada, [4]University of Alberta, Edmonton, Canada, [5]Foothills Medical Centre, Calgary, Canada, [6]Dalhousie University, Halifax, Canada

207 Mapping Abnormal Visual Cortex Development – Multimodal Imaging of Epileptic Patient with Dysplasia
Isabel Catarina Duarte[1,2], Gil Cunha[3,2,4], João Castelhano[2], Francisco Sales[5], Aldina Reis[2], João Paulo Cunha[6,3], Miguel Castelo-Branco[3,2]
[1]Brain Imaging Network, Coimbra, Potugal, [2]Institute of Biomedical Research in Light and Image, Coimbra, Portugal, [3]Brain Imaging Network, Coimbra, Portugal, [4]Hospitals of University of Coimbra, Coimbra, Portugal, [5]Department of Neurology, Hospitals of University of Coimbra, Coimbra, Portugal, [6]IEETA, University of Aveiro, Aveiro, Portugal

208 Localisation of epileptic generators with EEG-fMRI informed by EEG topographic maps
Frederic Grouiller[1], Rachel Thornton[2], Kristina Groening[3], Laurent Spinelli[1], John Duncan[2], karl Schaller[1], Michael Siniatchkin[3], Louis Lemieux[4], Margitta Seeck[1], Christoph Michel[1], Serge Vulliemoz[1]
[1]University Hospital and Faculty of Medicine, Geneva, Switzerland, [2]UCL Institute of Neurology, London, United Kingdom, [3]University Hospital, Kiel, Germany, [4]Institute of Neurology, London, United Kingdom

209 MEG high-frequency oscillations help determine epileptic seizure onset zones
Chiran Doshi[1,2], Manoj Raghavan[2], Peter LaViolette[2], Rey Ramirez[3], Wade Mueller[4], Sylvain Baillet[2]
[1]Marquette University, Milwaukee,WI, [2]Medical college of Wisconsin, Milwaukee, WI, [3]Milwaukee, United States, [4]Medical College of Wisconsin, Milwaukee, WI

210 Interictal spike localization of MEG and ECoG: comparison with actual resection area
Woorim Jeong[1], Chun Kee Chung[1], June Sic Kim[1]
[1]MEG Center, Department of Neurosurgery, Seoul National University College of Medicine, Seoul, Korea, Republic of

211 A voxelwise study of the HRF during epileptic seizures
Marco Leite[1], Alberto Leal[2], Patrícia Figueiredo[1]
[1]Institute for Systems and Robotics / Instituto Superior Técnico, Lisbon, Portugal, [2]Hospital Júlio de Matos, Lisbon, Portugal

212 The Readiness Potential Recorded from the Lateral Prefrontal Cortex using Electrocorticogrphy
Kyungin Choi[1], Chun Kee Chung[1,2], June Sic Kim[1]
[1]MEG Center, Department of Neurosurgery, Seoul National University Hospital, Seoul, Korea, Republic of, [2]Department of Neurosurgery, Seoul National University College of Medicine, Seoul, Korea, Republic of

213 Diffusion abnormalities of fiber tracts underlying cortical regions in temporal lobe epilepsy
Boris Bernhardt[1], Seok Jun Hong[1], Hosung Kim[1], Andrea Bernasconi[1], Neda Bernasconi[1]
[1]Neuroimaging of Epilepsy Laboratory, Montreal Neurological Institute, Montreal, QC, Canada

214 Dissociated Cortical and Subcortical Brain Development in Benign Epilepsy with Centrotemporal Spikes
Jeff Riley[1], Jack Lin[1], David Hsu[2], Carl Stafstrom[2], Kevin Dabbs[2], Daren Jackson[2], Bruce Hermann[2]
[1]University of California Irvine, Irvine, United States, [2]University of Wisconsin-Madison, Madison, United States

215 Diffuse Sulcal Anomalies Associated with Focal Epileptogenic Malformations of Cortical Development
Denis Rivière[1], Boris Bernhardt[2], Hosung Kim[2], Soek-Jun Hong[2], Matthieu Perrot[1], jean-francois mangin[1], Jean Régis[3], Neda Bernasconi[2], Andrea Bernasconi[2]
[1]NeuroSpin, CEA, Gif sur Yvette, France, [2]Neuroimaging of Epilepsy Laboratory, Montreal Neurological Institute, Montreal, QC, [3]Stereotactic and Functional Neurosurgery Department, Timone Hospital, A.P.M., Marseille, France

216 Evidences of hippocampi asymmetries reveled by brain Regional Homogeneity in resting-state fMRI
Fabricio Pereira[1], Andrea Alessio[1], Tatiane Pedro[2], Elisabeth Bilevicius[2], Mauricio Sercheli[2], Jane Rondina[2], Helka Ozelo[2], Roberto Covolan[2], Gabriela Castellano[1], Benito Dasmasceno[1], Fernando Cendes[1]
[1]University of Campinas, Campinas, São Paulo, Brazil, [2]Univerisity of Campinas, Campinas, São Paulo, Brazil

217 Analysis of BOLD deactivation from different ictal patterns
Ana Carolina Coan[1,2], Guilherme Beltramini[2], Brunno Campos[2], Roberto Covolan[2], Fernando Cendes[2]
[1]Unicamp, Campinas, Brazil, [2]UNICAMP, Campinas, Brazil

218 FMRI assessment of language plasticity in left and right focal epilepsy
Marcela Perrone-Bertolotti[1], Monica Baciu[1], Emilie Cousin[1], Cédric Pichat[1], Gaetan Yvert[1]
[1]Laboratoire de Psychologie et Neurocognition, UMR CNRS 5105, UPMF, Grenoble, France

219 Bilateral fractional anisotropy alterations in temporal lobe epilepsy of unknown cause
Jan Gerdes[1], Simon Keller[1], Tobias Ahrens[1], Siawoosh Mohammadi[2], Gabriel Möddel[1], Harald Kugel[3], Bernd Weber[4], E Ringelstein[1], Michael Deppe[1]
[1]Department of Neurology, University of Münster, Münster, Germany, [2]Wellcome Trust Centre for Neuroimaging, London, United Kingdom, [3]Dept. of Clinical Radiology, University of Muenster, [4]Department of Epileptology, University of Bonn, Bonn, Germany

Disorders of the Nervous System

Mood and Anxiety Disorders

220* **Cingulate MRspectroscopy is related to abnormal graph metrics in the salience network in depression, (O-M3)**
Dorothea Irene Horn[1], Anton Lord[2], Annemarie Osoba[1], Coraline Metzger[1], Joern Kaufmann[1], Kolja Schiltz[1], Johann Steiner[1], Bernhard Bogerts[1], Martin Walter[1], Michael Breakspear[2,3]
[1]Otto-von-Guericke University, Magdeburg, Germany, [2]Queensland Institute of Medical Research, Brisbane, Australia, [3]University of New South Wales and The Black Dog Institute, Sydney, Australia

221* **Dissociable patterns of hippocampal functional connectivity distinguish between anxiety disorders, (O-T1)**
Ashley Chen[1], Amit Etkin[1]
[1]Stanford University, Stanford, CA, USA

222* **FcMRI study of the Default Mode Network in school age children with history of Preschool Depression, (O-M3)**
Michael Gaffrey[1], Joan Luby[2], Grega Repovš[3], Kelly Botteron[2], Deanna Barch[2]
[1]Washington University School of Medicine, St. Louis, USA, [2]Washington University School of Medicine, Saint Louis, MO, [3]University of Ljubljana, Ljubljana, Slovenia

223* **MeCP2 affects frontal structure and metabolism differentially in healthy subjects and depression, (O-W3)**
Philipp Sämann[1], Luanna Dixson[2], Khanum Ridler[2], Thomas Nichols[2], Anil Rao[2], Brandon Whitcher[2], Florian Holsboer[3], Dorothee Auer[3], Pierandrea Muglia[4], Paul Matthews[5], Becky Inkster[6]
[1]MPI of Psychiatry, Munich, Germany, [2]GlaxoSmithKline Clinical Imaging Centre, Hammersmith Hospital, London, United Kingdom, [3]Max Planck Institute of Psychiatry, Munich, United Kingdom, [4]Genetics Division, Drug Discovery, Medicine Development Centre, Verona, Italy, [5]Imperial College London, London, United Kingdom, [6]Centre for Neuroscience, Imperial College, London, United Kingdom

224** **Altered Ventral Anterior Cingulate Connectivity in Young People with Major Depressive Disorder**
Christopher Davey[1], Ben Harrison[1], Nicholas Allen[1], Murat Yucel[1]
[1]University of Melbourne, Melbourne, Australia

225** **Associations between thyroid hormone transporter gene variants and grey matter volume changes**
Luanna Dixson[1,2], Khanum Ridler[1], Thomas Nichols[3], Anil Rao[3], Brandon Whitcher[3], Phillip Saemann[4], Dorothee Auer[4], Florian Holsboer[4], Pierandrea Muglia[5], Paul Matthews[3,6], Becky Inkster[3]
[1]GlaxoSmithKline Clinical Imaging Centre, Hammersmith Hospital, London, United Kingdom, [2]Central Institute for Mental Health, Mannheim, Germany, [3]GlaxoSmithKline Clinical Imaging Center, Hammersmith Hospital, London, United Kingdom, [4]Max Plank Insititute of Psychiatry, Munich, Germany, [5]Genetics Division, Drug Discovery, Medicine Development Centre, GlaxoSmithKline, Verona, Italy, [6]Department of Clinical Neuroscience, Imperial College, London, United Kingdom

226** **Cortical Thickness Correlates of Anxious/Depressed Symptoms in a Large Cohort of Heathy Children**
Simon Ducharme[1], James Hudziak[2], Kelly Botteron[3], Matthew Albaugh[4], Claude Lepage[5], Alan Evans[5], Sherif Karama[6]
[1]McGill University, Canada, [2]University of Vermont College of Medicine, Burlington, VT, [3]Washington University School of Medicine, Saint Louis, MO, [4]University of Vermont College of Medicine, Burlington, United States, [5]McConnell Brain Imaging Center, Montreal Neurological Institute, McGill University, Montreal, Quebec, [6]McGill University, Montreal, Canada

227 **Social Phobia Fusiform Functional Connectivity: Taking Face Processing Seriously**
Darren Campbell[1], Jitender Sareen[2], Lawrence Ryner[3], Jeffrey Reiss[4]
[1]University of Manitoba, Winnipeg, Manitoba, Canada, [2]University of Manitoba, Winnipeg, Manitoba, [3]National Research Council Institute of Biodiagnostics, Winnipeg, Manitoba, [4]University of Western Ontario, London, Ontario

228 **DTI maps of abnormal white matter microstructure in euthymic bipolar patients**
Marina Barysheva[1], Neda Jahanshad[2], Lori Altshuler[3], Paul Thompson[4]
[1]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [2]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [3]Department of Psychiatry and Biobehavioral Sciences, UCLA, Los Angeles, United States, [4]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, Los Angeles, United States

229 **The effect of sad mood induction on resting state networks**
Peter Kirsch[1], Christine Esslinger[1], Silke Huffziger[1], Christine Kühner[1]
[1]Central Institute of Mental Health, Mannheim, Germany

230 A Pattern Classification Study of Posttraumatic Stress Disorder based on Diffusion Tensor Imaging
Xun Yang[1], Qizhu Wu[2], Changfeng Jin[3], Xiaolei Hu[3], Yi Liao[4], Lingjiang Li[3], Qiyong Gong[1]
[1]Huaxi MR Research Center, Department of Radiology, West China Hospital of Sichuan University, Chengdu, China, [2]West China Hospital of Sichuan University, Chengdu, China, [3]Mental Health Institute, the Second Xiangya Hospital of Central South University, Changsha, China, Changsha, China, [4]Huaxi MR Research Center (HMRRC), Dept. of Radiology, West China Hospital of Sichuan University, Che, Chengdu, China

231 Functional Connectivity Profile of Seasonal Affective Disorder
Ahmed Abou Elseoud[1], Juuso Nissila[2], Anu Liettu[3], Jari Jokelainen[4], Timo Takala[5], Antti Aunio[2], Tuomo Starck[6], Juha Nikkinen[7], Jukka Remes[6], Hannu Koponen[8], Osmo Tervonen[6], Markku Timonen[5], Vesa Kiviniemi[6]
[1]Diagnostic Radiology, Oulu, Finland, [2]Valkee Ltd., Oulu, Finland, [3]Department of Psychiatry, University of Oulu, Oulu, Finland, [4]Institute of Health Sciences and General Practice, University of Oulu, Oulu, Finland, [5]Institute of Health Sciences and General Practice, Oulu, Finland, [6]Department of Diagnostic Radiology, University and University Hospital of Oulu, Oulu, Finland, [7]Department of Diagnostic Radiology, Oulu, Finland, [8]Department of Psychiatry, University Hospital of Kuopio, Kuopio, Finland

232 The Effects of Prenatal Maternal Depression on the Neurodevelopment of Social Cognition in Children
Amy Anderson Zose[1], Anjana Muralidharan[1], Joshua Cisler[2], Opal Ousley[1], George Andrew James[2], Clint Kilts[2]
[1]Emory University, Atlanta, GA, [2]University of Arkansas for Medical Sciences, Little Rock, AR

233 Separating the math from the anxiety in mathematics anxiety
Ian Lyons[1], Sian Beilock[1]
[1]University of Chicago, Chicago, IL

234 Do all phobics feel the same? Comparing interoception between spider and blood phobia
Xavier Caseras[1], Kevin Murphy[2], David Mataix-Cols[3], Jesus Pujol[4], Rafael Torrubia[5]
[1]Cardiff University, [2]CUBRIC, School Of Psychogy, Cardiff University, United Kingdom, [3]institute of Psychiatry, London, United Kingdom, [4]CRC Corporacio Sanitaria, Barcelona, Spain, [5]Universitat Autonoma de Barcelona, Barcelona, Spain

235 Orbitofrontal hyperactivity and habituation in social anxiety disorder patients: an fMRI study
Ronald Sladky[1], Jasmin Tröstl[1], Christoph Kraus[2], Siegfried Kasper[2], Rupert Lanzenberger[2], Ewald Moser[1], Christian Windischberger[1]
[1]MR Center, Medical University of Vienna, Vienna, Austria, [2]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria, Vienna, Austria

236 Subcortical GABA is reduced in young adults at risk of depression
Richard Edden[1], John Evans[2], Paul Keedwell[3]
[1]John Hopkins University, Baltimore, United States, [2]Cardiff University Brain Research Imaging Centre, Cardiff, United Kingdom, [3]Cardiff University Department of Psychological Medicine and Neurology, Cardiff, United Kingdom

237 Dysfunctional frontolimbic connectivity during emotion regulation in Bipolar I euthymic subjects
Jennifer Townsend[1], Salvatore Torrisi[1], Susan Bookheimer[2], Lori Altshuler[3]
[1]UCLA, Los Angeles, CA, [2]Departmen of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA, [3]Department of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA

238 Association of Ghrelin Plasma Level and Morphometric Abnormality in Patients with Mood Disorders
Koji Matsuo[1], Masayuki Nakano[2], Mami Nakashima[1], Ayumi Kobayashi[2], Kumiko Hara[2], Yuko Fujii[2], Akiko Hashimoto[2], Kazuteru Egashira[2], Syusaku Uchida[1], Toshio Matsubara[1], Yoshifumi Watanabe[1]
[1]Yamaguchi University Graduate Shool Of Medicine, Ube, Yamaguchi, Japan, [2]Yamaguchi University Graduate School of Medicine, Ube, Yamaguchi, Japan

239 Working memory-related brain activation in premenstrual dysphoria: a PET and fMRI study
Erica Baller[1], Peter Schmidt[1], Philip Kohn[1], Shau-Ming Wei[1], David Rubinow[1], Karen Berman[1]
[1]National Institutes Of Health, NIMH, IRP, Bethesda, United States

240 Predicting Treatment Response in Social Anxiety Disorder Using Magnetic Resonance Imaging
Oliver Doehrmann[1], Satrajit Ghosh[1], Frida Polli[1], Gretchen Reynolds[1], Susan Whitfield-Gabrieli[1], Stefan Hofmann[2], Mark Pollack[3], John Gabrieli[1]
[1]MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, United States, [2]BOSTON UNIVERSITY, BOSTON, United States, [3]MASSACHUSETTS GENERAL HOSPITAL, BOSTON, United States

241 Listen to your heart: brain reactivity to interoceptive cues in the anxiety sensitivity phenotype
Nina Maslowski[1], Ulrike Lueken[1]
[1]Technische Universität Dresden, Dresden, Germany

242 High-field MR brain imaging unmasks refractoriness of major depression
Su Lui[1], Andrea Mechelli[2], Lihua Qiu[3], Qizhu Wu[3], zhiyun Jia[1], Qiyong Gong[4]
[1]West China Hospital of Sichuan University, [2]Institute of Psychiatry King's College London, London, United Kingdom, [3]West China Hospital of Sichuan University, Chengdu, China, [4]Sichuan University, Chengdu, China

243 An fMRI Study of Fear Processing in Anorexia Nervosa and Body Dysmorphic Disorder
Cara Bohon[1], Faraz Alizadeh[1], Teena Moody[1], Sarah Madsen[1], Michael Strober[1], Jamie Feusner[1]
[1]UCLA, Los Angeles, CA

244 Hippocampus Volume and Children with Preschool Onset Major Depressive Disorder
Andy Belden[1], Joan Luby[2], Casey Babb[2], Tomoyuki Nishino[2], Michael Miller[3], J. Ratnanather[3], Deanna Barch[2], Kelly Botteron[4]
[1]Washington University School of Medicine, [2]Washington University School of Medicine, Saint Louis, MO, [3]Johns Hopkins University, Baltimore, MD, [4]Washington Univ School Of Medicine Dept. Of Psychiatry, St. Louis, United States

245 Linguistic versus visual emotional face-matching: Unique neural responses in military men with PTSD
Darren Campbell[1], Kristina Joyal[2], Marc Wallace[2], Lindsey Shumila[2], Joseph Polimeni[2], Jitender Sareen[2], Lawrence Ryner[3], Jeffrey Reiss[4]
[1]University of Manitoba, Winnipeg, Manitoba, Canada, [2]University of Manitoba, Winnipeg, Manitoba, [3]National Research Council Institute of Biodiagnostics, Winnipeg, Manitoba, [4]University of Western Ontario, London, Ontario

246 The lateral orbitofrontal cortex and suicidal behavior: angry faces and decision-making.
Fabrice Jollant[1], Natalia Lawrence[2], Emilie Olié[3], Philippe Courtet[3], Mary Phillips[4]
[1]McGill University & Douglas University Mental Health Research Institute, Montréal, Canada, [2]Cardiff University, Cardiff, United Kingdom, [3]Université Montpellier I, Montpellier, France, [4]University of Pittsburgh, Pittsburgh, United States

247 Cortical thickness analysis indicates a Bipolar-ADHD interaction in adult comorbid subjects
Catherine Hegarty[1], Lara Foland-Ross[2], Katherine Narr[3], Yilan Yang[3], Catherine Sugar[4,1], Susan Bookheimer[5,1], James McGough[5], Lori Altshuler[5,6]
[1]Semel Institute for Neuroscience and Human Behavior, UCLA, Los Angeles, CA, [2]Stanford Mood and Anxiety Disorders Laboratory, Department of Psychology, Stanford University, Stanford, CA, [3]Laboratory of Neuroimaging, Department of Neurology, UCLA School of Medicine, Los Angeles, CA, [4]Department of Biostatistics, School of Public Health, UCLA, Los Angeles, CA, [5]Department of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA, [6]Department of Psychiatry, VA Greater Los Angeles Healthcare System, West Los Angeles Healthcare Center, Los Angeles, CA

248 Improving efficacy of rTMS treatment in depression: Image guided targeting of left DLPFC
Shalini Narayana[1], Wei Zhang[1], Casey Strickland[1], Patrick Smith[2], Jeslina Raj[2], Naomi Marne[1], Vivek Singh[2], Peter Thompson[2], Pedro Delgado[2], Peter Fox[1]
[1]Research Imaging Institute, University of Texas Health Science Center at San Antonio, San Antonio, TX, United States, [2]Department of Psychiatry, University of Texas Health Science Center at San Antonio, San Antonio, TX, United States

249 Cumulative adversity influences fMRI neural responses to emotional stress
Dongju Seo[1], Kristen Tsou[2], Emily Ansell[2], Keri Tuit[2], Rajita Sinha[2]
[1]Yale University School of Medicine, New Haven, United States, [2]Yale University School of Medicine, new haven, United States

250 Relations between Hippocampal Volumes and Functional Responses to Negative Emotions in MDD Children
Hideo Suzuki[1], Kelly Botteron[1], Casey Babb[1], Tomoyuki Nishino[1], Michael Miller[2], J. Ratnanather[2], Joan Luby[1], Deanna Barch[1]
[1]Washington University School of Medicine, Saint Louis, MO, [2]Johns Hopkins University, Baltimore, MD

251 Corpus Callosum Morphology in Twin Pairs Discordant for Bipolar Disorder
Carrie Bearden[1], Theo van Erp[2], Christina Boyle[3], Rebecca Dutton[3], Eileen Luders[4], Sarah Madsen[5], Tuula Kieseppa[6], Annamari Tuulio-Henriksson[7], Matti Huttunen[7], Timo Partonen[7], Jaakko Kaprio[7], Jouko Lonnqvist[7], Paul Thompson[8], Tyrone Cannon[9]
[1]University of California, Los Angeles, Los Angeles, CA USA, [2]University of California, Irvine, Irvine, CA, [3]University of California, Los Angeles, Los Angeles , CA, [4]UCLA, Dept. Of Neurology, Los Angeles, United States, [5]University of California - Los Angeles, Los Angeles, CA, [6]Department of Psychiatry, Peijas Hospital, Helsinki University Central Hospital, Vantaa, Finland, [7]Department of Mental Health and Substance Abuse Services, National Institute for Health and Welfare, Helsinki, Finland, [8]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, Los Angeles, United States, [9]University of California, Los Angeles, Los Angeles, United States

252 Application of real-time fMRI-neurofeedback in treatment of emotional disorders
Pegah Sarkheil[1,2], Anna Zilverstand[2], Niclas Kilian-Hütten[2], Frank Schneider[1], Klaus Mathiak[1], Rainer Goebel[2,3]
[1]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [2]Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, Netherlands, [3]Maastricht Brain Imaging Centre (M-BIC), Maastricht, Netherlands

253 Subgenual Anterior Cingulate Functional Connectivity during Rest as a Function of Early Life Stress
Josh Cisler[1], George Andrew James[1], Shanti Tripathi[1], Christine Heim[2], Tanja Mletzko[2], Tim Ely[3], Helen Mayberg[4], Xiaoping Hu[5], Clint Kilts[1]
[1]University of Arkansas for Medical Sciences, Little Rock, AR, [2]Emory University, Atlanta, GA, [3]Emory, Atlanta, GA, [4]Emory University, Atlanta, United States, [5]Emory University/ Georgia Tech, Atlanta, GA

254 Cortical Correlates of Self-reported Anxious-depressed Symptoms amongst Healthy Young Adults

Matthew Albaugh[1], James Hudziak[1], Simon Ducharme[2], Sherif Karama[2], Kelly Botteron[3], Robert Althoff[1], Alan Evans[2]
[1]University of Vermont College of Medicine, Burlington, VT, [2]McGill University, Montreal, Quebec, [3]Washington University School of Medicine, Saint Louis, MO

255 Testing cerebrospinal fluid alterations in melancholic depression: a comparison between methods

Esther Via[1], Carles Soriano-Mas[2], Jesus Pujol[3], Mikel Urretavizcaya[1], Rosa Hernández-Ribas[1], Joan Deus[4], Virginia Soria[1], Marina López-Solà[5], José Menchón[1], Narcis Cardoner[1]
[1]Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [2]Instituto Carlos III. Bellvitge University Hospital, Barcelona, Spain, [3]CRC Corporacio Sanitaria., Barcelona, Spain, [4]Universitat Autònoma de Barcelona, Barcelona, Spain, [5]PRBB CRC-Hospital del Mar, Barcelona, Spain

256 Dysfunctional PPI during Implicit Emotion Regulation in Bipolar II Depression

Salvatore Torrisi[1], Nathalie Vizueta[1], Elliot Berkman[2], Lara Foland-Ross[3,4], Jennifer Townsend[1], Teena Moody[5], Ana Aquino[1], Jeffery Fischer[1], Susan Bookheimer[6], Lori Altshuler[7]
[1]University of California, Los Angeles, Los Angeles, CA, [2]University of Oregon, Eugene, OR, [3]Laboratory of Neuroimaging, Los Angeles, CA, [4]Stanford, Palo Alto, CA, [5]University of California, Los Angeles, Hermosa Beach, CA, [6]Departmen of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA, [7]Department of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA

257 Neural Circuitry of Emotional Processing In Late-Life Depression

Linda Mah[1,2], Lynne Williams[1], Rachel Leung[1], Stefanie Freel[1], Bruce Pollock[3,2]
[1]Kunin-Lunenfeld Applied Research Unit, Rotman Research Institute, Baycrest, Toronto, Canada, [2]University of Toronto, Toronto, Canada, [3]Centre for Addiction and Mental Health, Toronto, Canada

258 Functional connectivity alterations in major depression identified from changes in brain anatomy

Marina Lopez Sola[1], Jesus Pujol[1], Rosa Hernández-Ribas[2], Ben Harrison[3], Oren Contreras-Rodríguez[1], Carles Soriano-Mas[1], Johan Deus[4], Hector Ortiz[1], José Menchón[2], Julio Vallejo[2], Narcis Cardoner[2]
[1]PRBB CRC-Hospital del Mar, Barcelona, Spain, [2]Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [3]The University of Melbourne, Melbourne, Australia, [4]Universitat Autònoma de Barcelona, Barcelona, Spain

259 Neural correlates of motivational behavior with mesolimbic pathway in major depressive disorder

Masayuki Nakano[1], Koji Matsuo[1], Kazuteru Egashira[1], Toshio Matsubara[1], Mami Nakashima[1], Ayumi Kobayashi[1], Kumiko Hara[1], Syusaku Uchida[1], Kanji Takahashi[2], Hiroaki Hiroaki Masaki[3], Masatomo Suetsugi[1], Yoshifumi Watanabe[1]
[1]Division Of Neuropsychiatry, Department Of Neuroscience, Yamaguchi University Gr, Ube, Yamaguchi, [2]Katakura Hospital, Ube, Yamaguchi, [3]Faculty of Sports Sciences, Waseda University, Saitama, Japan

260 White Matter Alterations in Social Anxiety Disorder: a DTI study

Jasmin Tröstl[1], Ronald Sladky[1], Allan Hummer[1], Christoph Kraus[2], Ewald Moser[1], Siegfried Kasper[2], Rupert Lanzenberger[2], Christian Windischberger[1]
[1]MR Centre Of Excellence, Medical University Of Vienna, Austria, [2]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

261 A Reduced Neural Response in Emotion-Related Inhibition in Military Men with PTSD

Kristina Joyal[1], Darren Campbell[1], Lindsey Shumila[1], Marc Wallace[1], Patricia Gervai[2], Jitender Sareen[1], Jeffrey Reiss[3]
[1]University of Manitoba, Winnipeg, Manitoba, [2]National Research Council of Canada, Winnipeg, Manitoba, [3]University of Western Ontario, London, Ontario

262 Brain structure change in Posttraumatic Stress Disorder: A combined surface- and voxel-based study

Sheeva Azma[1], Rachel Thompson[2], Diana Bermudez[3], Rachael Renton[1], Adebanke Adeyemo[1], James Meyerhoff[3], Richard Amdur[4,3], Bonnie Green[3], Mary Ann Dutton[3], John VanMeter[1]
[1]Center for Functional and Molecular Imaging, Georgetown University Medical Center, Washington, DC, [2]The Catholic University of America, Washington, DC, [3]Center for Trauma and the Community, Department of Psychiatry, Georgetown University Medical Center, Washington, DC, [4]Research Service, VA Medical Center, Washington, DC

263 A diffusion tensor imaging study in South African HIV patients with and without apathy

Jean-Paul Fouche[1], Paul Carey[1], Hans Strijdom[2], Bruce Spottiswoode[3,4]
[1]Department of Psychiatry, University of Stellenbosch, Cape Town, South Africa, [2]Department of Medical Physiology, University of Stellenbosch, Cape Town, South Africa, [3]Department of Radiological Sciences and Oncology, University of Stellenbosch, Cape Town, South Africa, [4]MRC/UCT Medical Imaging Research Unit, Department of Human Biology, University of Cape Town, Cape Town, South Africa

264 Brain-behavior relationships in body dysmorphic disorder: neural correlates of eye fixation duration

Jamie Feusner[1], Alexandra Klomhaus[1], Hayley Moller[1], Cara Bohon[1], Donatello Arienzo[1], Sarah Madsen[1], Teena Moody[1]
[1]UCLA, Los Angeles, CA

265 Somatic Awareness in Anxious Youth: Distinct Neural Correlates of Trait and State Somatic Symptoms
Darcy Mandell[1], Cecile Ladoucer[2], Greg Siegle[2]
[1]University of Pittsburgh, [2]University of Pittsburgh, School of Medicine, Pittsburgh, PA

266 Altered structural corticosubcortical connectivity in major depression dependent on symptom severity
Annemarie Osoba[1], Jürgen Haenggi[2], Dorothea Irene Horn[3], Coraline Metzger[1], Ulf Eckert[1], Kolja Schiltz[1], Kathrin Zierhut[1], Bernhard Bogerts[1], Martin Walter[1]
[1]Otto-von-Guericke University, Magdeburg, Germany, [2]University of Zurich, Institute of Psychology, Zurich, Switzerland, [3]Otto-von-Guericke University Magdeburg, Germany

267 Medial prefrontal-ventral striatum connectivity during emotional word in major depression
Marie-Jose van Tol[1,2], Ilya Veer[2], Nic van der Wee[3,2], Frans G. Zitman[4], Serge Rombouts[5], Dick Veltman[6], Andre Aleman[7], Tom Johnstone[8]
[1]BCN Neuroimaging Center, University Medical Center Groningen, Groningen, The Netherlands, [2]Leiden Institute for Brain and Cognition, Leiden, Netherlands, [3]LUMC, Leiden, Netherlands, [4]department of psychiatry, Leiden University Medical Center, Leiden, Netherlands, [5]Leiden University Medical Center, Leiden, Netherlands, [6]VU University Medical Center, Department of Psychiatry, Amsterdam, Netherlands, [7]BCN NeuroImaging Center, Groningen, Netherlands, [8]Psychology Department, University of Reading, Reading, United Kingdom

268 Electrophysiological evidences of visual avoidance of emotional faces and bodies in social anxiety
Mandy Rossignol[1], Pierre Philippot[2], Sophie-Alexandra Fisch[2], Salvatore Campanella[3], Frederic Joassin[4]
[1]Louvain-La-Neuve, Belgium, [2]Université Catholique de Louvain, Louvain-La-Neuve, Belgium, [3]Université Libre de Bruxelles, Bruxelles, Belgium, [4]Université Catholique de Louvain, Louvain-la-Neuve, Belgium

269 White Matter Integrity in Visual and Emotional Processing Systems in Body Dysmorphic Disorder
Donatello Arienzo[1], Wei Li[1], Liang Zhan[1], Paul Thompson[2], Alex Leow[3], Jamie Feusner[4]
[1]UCLA, Los Angeles, CA, [2]Laboratory of Neuro Imaging - UCLA School of Medicine, Los Angeles, CA, [3], Ph.D., M.D. - University of Illinois-Chicago, Chicago, IL, [4], M.D. - Semel Institute for Neuroscience and Human Behavior, Los Angeles, CA, Los Angeles, CA

270 Aberrant resting-state functional connectivity in panic disorder patients
Justine Pannekoek[1], Ilya Veer[2], Marie-Jose van Tol[3], Liliana Demenescu[3], Andre Aleman[3], Dick Veltman[4], Frans G. Zitman[1], Serge Rombouts[2], Nic van der Wee[1]
[1]Leiden University Medical Center, Leiden, Netherlands, [2]Leiden Institute for Brain and Cognition, Leiden, Netherlands, [3]BCN NeuroImaging Center, Groningen, Netherlands, [4]VU University Medical Center, Department of Psychiatry, Amsterdam, Netherlands

271 Visual Processing of Faces in Anorexia and Body Dysmorphic Disorder
Teena Moody[1], Kelsey Mason[2], Cara Bohon[2], Sarah Madsen[3], Donatello Arienzo[2], Jamie Feusner[1]
[1]Semel Institute for Neuroscience and Human Behavior, Los Angeles, CA, [2]UCLA, Los Angeles, CA, [3]UCLA, Dept of Neurology, Los Angeles, CA

272 Neural mechanism of social cognitive deficits in major depressive disorder : a preliminary study
Hyeongrae Lee[1], Eun Lee[2], Jeonghun Ku[3], YoungSeok Shin[1], Je Yeon Lee[1], Kyung Ran Kim[2], Kang Jun Yoon[4], In Young Kim[1], Sun I. Kim[1]
[1]Hanyang University, Seoul, Korea, Republic of, [2]Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Keimung University, Daeku, Korea, Republic of, [4]St. Peter's Hospital, Seoul, Korea, Republic of

273 Diagnosis of Depressive Disorder Using Multi-parametric Classification Approach with Structural MRI
Lihua Qiu[1], Qizhu Wu[1], Peiyu Huang[2], Xiaoqi Huang[3], Su Lui[3], Xun Yang[3], Fei Li[3], Weihong Kuang[4], Qiyong Gong[3]
[1]West China Hospital of Sichuan University, Chengdu, China, [2]Institute of Neuroscience, Chongqing Medical University, Chongqing, China, [3]Huaxi MR Research Center, Department of Radiology, West China Hospital of Sichuan University, Chengdu, China, [4]Department of Psychiatry, West China Hospital of Sichuan University, Chengdu, China

274 NEURAL CORRELATES OF PLATELET SEROTONIN RE-UPTAKE
Christian Scharinger[1], Lucie Bartova[1], Harald Esterbauer[1], Michael Freissmuth[1], Tina Hofmaier[1], Klaudius Kalcher[1], Gerald Pail[1], Thomas Perkmann[1], Ulrich Rabl[1], Harald Sitte[1], Zeljko UZELAC[1], Matthaeus Willeit[1], Christian Kasess[2], Kersten Diers[3], Beate Hartinger[1], Wolfgang Huf[4], Andreas Meyer-Lindenberg[5], Siegfried Kasper[6], Rupert Lanzenberger[6], Burkhard Brocke[3], Ewald Moser[7], Lukas Pezawas[8]
[1]Medical University of Vienna, Vienna, Austria, [2]Vienna, Austria, [3]TU Dresden, Dresden, Germany, [4]Wien, Austria, [5]Central Institute of Mental Health (CIMH) Mannheim, Mannheim, Germany, [6]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria, Vienna, Austria, [7]Medical Universsity of Vienna, Vienna, Austria, [8]Medical University of Vienna, Wien, Austria

275 Impulsivity in Hypomania: Neural Correlates of Delayed Rewards and Penalties
Liam Mason[1], Richard Bentall[2], Marianna Blackburn[3], Wael El-Deredy[1]
[1]University Of Manchester, United Kingdom, [2]University of Liverpool, Liverpool, United Kingdom, [3]The University Of Manchester, United Kingdom

276 Early Influence of the rs4675690 on the Neural Substrates of Sadness
Emilie Fortier[1], Anne Noreau[1], Franco Lepore[1], Michel Boivin[2], Daniel Pérusse[1], Guy Rouleau[1], Mario Beauregard[1]
[1]Université de Montréal, Montréal, Canada, [2]Université Laval, Québec, Canada

277 Functional connectivity for visual processing of bodies in anorexia and body dysmorphic disorder
Sarah Madsen[1], Teena Moody[1], Cara Bohon[1], Michael Strober[1], Jamie Feusner[1]
[1]University of California - Los Angeles, Los Angeles, CA

278 A Study of the Neural Mechanism of Posttraumatic Stress Disorder using Diffusion Tensor Imaging
Qizhu Wu[1], Xun Yang[1], Changfeng Jin[2], Xiaolei Hu[2], Yi Liao[1], Lingjiang Li[2], Qiyong Gong[1]
[1]Huaxi MR Research Center, West China Hospital of Sichuan University, Chengdu, China, [2]Mental Health Institute, the Second Xiangya Hospital of Central South University, Changsha, China

279 The Effect of Early Life Stress on Default Network Activity in Healthy Adult Subjects
Noah Philip[1], Lawrence Sweet[2], Audrey Tyrka[2], Raymond Niaura[3], Lawrence Price[2], Linda Carpenter[2]
[1]Butler Hospital, Dept of Psychiatry and Human Behavior, Brown University, Providence, RI, USA, [2]Butler Hospital, Dept of Psychiatry and Human Behavior, Brown University, Providence, RI, [3]American Legacy Foundation, Washington, DC

280 A Tractography Analysis of Suicidal White Matter Target for Major Depressive Disorder
Zhiyun Jia[1], Yuqing Wang[2], Weihong Kuang[3], Qiyong Gong[1]
[1]Huaxi MR Research Center (HMRRC), Department of Radiology, West China Hospital of Sichuan University, Chengdu, China, [2]University of Electronic Science and Technology, Chengdu, China, [3]Department of Psychiatry, West China Hospital of Sichuan University, Chengdu, China

281 A neurocognitive bias toward sad faces in females at risk of depression
Paul Keedwell[1], Salmons Brett[2], Mary Phillips[3], John Evans[4], Richard Wise[2], Andrew Lawrence[2]
[1]Cardiff University Department of Psychological Medicine and Neurology, Cardiff, United Kingdon, [2]Cardiff University, Cardiff, United Kingdom, [3]University of Pittsburgh, Pittsburgh, United States, [4]Cardiff University Brain Research Imaging Centre, Cardiff, United Kingdom

282 Context insensitivity during positive and negative emotional expectancy in depression
Felix Bermpohl[1], Melanie Feeser[1], Florian Schlagenhauf[2], Meline Stoy[3], Soyoung Park[4], Philipp Sterzer[5], Stefan Gutwinski[1], Thorsten Kienast[1], Michael Bauer[6], Andreas Heinz[7], Andreas Ströhle[8]
[1]Department of Psychiatry and Psychotherapy, Charité, Berlin, Germany, [2]Charite University Medicine, Berlin, Germany, [3]Charité - Universitätsmedizin Berlin, Berlin, Germany, [4]Berlin School of Mind and Brain, Berlin, Germany, [5]Charite University Hospital, Berlin, Germany, [6]Department of Psychiatry and Psychotherapy, Universitätsklinikum Carl Gustav Carus, Dresden, Dresden, Germany, [7]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany, [8]Department of Psychiatry and Psychotherapy, Campus Charité, Universitätsmedizin Berlin, Berlin, Germany

283 Oscillatory Responses to Happy Facial Expressions Differentiate Bipolar and Healthy Individuals
Stefanie Hassel[1], Anto Bagic[2], Glenda MacQueen[1], Mary Phillips[2]
[1]University of Calgary, Calgary, AB, Canada, [2]University of Pittsburgh, Pittsburgh, PA, USA

284 Cortical thickness and subcortical volumes in dissociative identity and mood disorders
Sima Chalavi[1], Blaise Frederick[2], Robert Savoy[3], Paula Wolk[2], Brent Forester[2], Eline Vissia[4], A.A.T. Simone Reinders[1]
[1]BCN Neuroimaging Center, University of Groningen, Groningen, the Netherlands, Department of Psychosis Studies, Institute of Psychiatry, King's College London, UK, [2]Harvard Medical School, Boston, MA, McLean Hospital, Belmont, MA, USA, [3]Harvard Medical School, Boston, MA, HyperVision, Inc., Lexington, MA, USA, [4]BCN Neuroimaging Centrum (BCN-NiC), University of Groningen, Groningen, Netherlands

285 Crossmodal emotional integration in depression
Veronika Mueller[1], Edna-Clarisse Cieslik[2], Tanja Kellermann[1], Frank Schneider[1], Bruce Turetsky[3], Simon Eickhoff[1]
[1]RWTH Aachen University, Department of Psychiatry, Psychotherapy and Psychosomatics, Aachen, Germany, [2]Research Center Juelich, Institute of Neuroscience and Medicine, Juelich, Germany, [3]Neuropsychiatry Division, Department of Psychiatry, University of Pennsylvania School of Medicine, Philadelphia, United States

286 The Westphal-Paradigm and its clinical application in patients with panic disorder and agoraphobia
Andre Wittmann[1], Florian Schlagenhauf[1], Anne Guhn[2], Meline Stoy[1], Thomas Fydrich[3], Lydia Fehm[3], Bettina Pfleiderer[4], Alexander Gerlach[5], Ulrike Lueken[6], Tilo Kircher[7], Isabelle Reinhardt[8], Hans-Ulrich Wittchen[6], Andreas Ströhle[1]
[1]Charité - Universitätsmedizin Berlin, Berlin, Germany, [2]Julius-Maximilians-Universität Würzburg, Würzburg, Germany, [3]Humboldt - Universität Berlin, Berlin, Germany, [4]Westfälische - Wilhelms - Universität Münster, Münster, Germany, [5]Universität zu Köln, Köln, Germany, [6]Technische Universität Dresden, Dresden, Germany, [7]Philipps - Universität Marburg, Marburg, Germany, [8]Universitätsklinikum Aachen, Aachen, Germany

287 Structural and functional alterations in the depressed brain: A quantitative meta-analysis
Julia Sacher[1,2], Jane Neumann[3,4], Tillmann Fuenfstueck[3], Alexandra Soliman[5], Arno Villringer[6], Matthias Schroeter[6]
[1]Max-Planck-Institute for Human Cognitive and Brain Sciences., Leipzig, Germany, [2]Clinic of Cognitive Neurology, University of Leipzig, Leipzig, Germany, [3]Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [4]Leipzig University Medical Center, IFB AdiposityDiseases., Leipzig, Germany, [5]PET Centre, Centre for Addiction and Mental Health, Toronto, Germany, [6]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

288 Vascular depression & fMRI: Diminished cerebrovascular response to working memory

Sonya Kaur[1], Mitzi Gonzales[2], Danielle Eagan[3], Andreana Haley[4]
[1]University of Texas, Austin, [2]University of Texas, Austin, Austin, United States, [3]University of Texas Austin, Austin, United States, [4]University of Texas at Austin, Austin, United States

289 Locus-coeruleus activation in patients with major depression and suicidal ideations

Martin Desseilles[1], Christophe Phillips[2], John Matthews[3], Thien Thanh Dang-Vu[4], Virginie Sterpenich[5], Genevieve Albouy[6], Christina Schmidt[4], Annabelle Darsaud[4], Eric Salmon[7], Gilles Vandewalle[8], Evelyne Balteau[4], Christian Degueldre[4], Andre Luxen[4], Marc Ansseau[9], Sophie Schwartz[10], Pierre Maquet[7]
[1]Cyclotron Research Centre, University of Liège and Massachusetts General Hospital, Boston, MA, [2]Cyclotron Research Centre, University of Liege, Sart Tilman, Liege, Belgium, [3]Massachusetts General Hospital, Boston, MA, [4]Cyclotron Research Centre, University of Liège, Liege, Belgium, [5]Department of Neurosciences, University of Geneva, Geneva, Switzerland, [6]CRIUGM, University of Montreal, Montreal, Canada, [7]Cyclotron Research Centre, University of Liège, Liège, Belgium, [8]Functional Neuroimaging Unit, University of Montreal Geriatric Institute, Montreal, Quebec, [9]Department of Psychiatry, University of Liège, Liege, Belgium, [10]Cyclotron Research Centre, University of Geneva, Geneva, Switzerland

290 Remission in Major Depressive Disorder is Dependent on Neural Adaptation

Christian Scharinger[1], Beate Hartinger[2], Kersten Diers[3], Wolfgang Huf[4], Klaudius Kalcher[5], Gerald Pail[2], Harald Esterbauer[6], Siegfried Kasper[7], Ewald Moser[8], Burkhard Brocke[9], Lukas Pezawas[10]
[1]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria, [2]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria, Austria, [3]Institute for Psychology II, TU Dresden, Dresden, Germany, [4]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Wien, Austria, [5]Medical University of Vienna, Vienna, Austria, [6]Institute for Labaratory Medicine, Medical University of Vienna, Vienna, Austria, [7]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria, Vienna, Austria, [8]MR Center of Excellence, Medical Universsity of Vienna, Vienna, Austria, [9]Insitute for Psychology II, TU Dresden, Dresden, Germany, [10]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria, Wien, Austria

291 The Neural Correlates of Anxiety across Menstrual Cycle

Ren-Jen Hwang[1,2,3], Chi-Hsun Wu[4], Kuei-Lan Yu[2], Mei-hsiang Lin[2], Jen-Chuen Hsieh[5,6,3,7]
[1]Institute of Neuroscience, School of Life Science, National Yang-Ming, Taipei , Republic of China, [2]Chang Gung Institute of Technology, Tao-Yuan, Republic of China, [3]Dept. Medical Research & Education, Taipei Veterans General Hospital, Taipei, Republic of China, [4]Department of Electrical Engineering, National Central University, Jhongli, Taiwan, Republic of China, [5]Institute of Brain Science, National Yang-Ming University, Taipei, Taiwan, Republic of China, [6]Institute of Neuroscience, School of Life Science, National Yang-Ming University, Taipei, Republic of China, [7]Brain Research Center, National Yang-Ming University, Taipei, Republic of China

292 Processing of musical stimuli in major depressive disorder naive to treatment an fMRI study

ENRIQUE OCTAVIO FLORES GUTIÉRREZ[1], Alcauter Sarael[2], Juan José Cervantes[3], Marina Torres[3]
[1]INSTITUTO NACIONAL DE PSIQUIATRÍA RAMÓN DE LA FUENTE MUÑIZ, Mexico, [2]Instituto de Neurobiología UNAM, Juriquilla, México, [3]Instituto Nacional de Psiquiatría Ramón de la Fuente, DF, Mexico

293 An fMRI Study of Adolescent Depression

TONY YANG[1], Martin Paulus[2], Alan Simmons[2], Susan Tapert[3]
[1]UNIVERSITY OF CALIFORNIA SAN DIEGO, SAN DIEGO, United States, [2]UCSD, La Jolla, CA, [3]UCSD, La Jolla, United States

294 Amygdala activity changes in panic disorder patients during cognitive behavioral therapy

Aleš Grambal[1], Zbyněk Tüdös[1], Ján Praško[1], Petr Hlustik[1]
[1]Palacky University and University Hospital Olomouc, Olomouc, Czech Republic

295 Morphometric abnormalities in unaffected first-degree relatives of mood disorders

Toshio Matsubara[1], Koji Matsuo[2], Masayuki Nakano[3], Mami Nakashima[2], Kazuteru Egashira[2], Masatomo Suetsugi[3], Yoshifumi Watanabe[4]
[1]Division Of Neuropsychiatry, Department Of Neuroscience, Yamaguchi University Gr, Ube,Japan, [2]Division Of Neuropsychiatry, Department Of Neuroscience, Yamaguchi University Gr, Ube, Yamaguchi, [3]Division Of Neuropsychiatry, Department Of Neuroscience, Yamaguchi University Gr, Ube, Japan, [4]Division Of Neuropsychiatry, Department Of Neuroscience, Yamaguchi University G, Ube, Yamaguchi

296 Early-onset and late-onset depression: a tract-based spatial statistics study

Diana Bezerra[1], Marco Antonio Moscoso[1], Salma Rose Ribeiz[1], Fabricio Pereira[2], Fernando Cendes[2], Edson Amaro[1], Cássio Bottino[1]
[1]University of Sao Paulo, Sao Paulo, Brazil, [2]University of Campinas, Campinas, Brazil

Disorders of the Nervous System

Traumatic Brain Injury

297 Limbic White Matter Connectivity in Military-related Mild and Moderate Traumatic Brain Injury
Ping-Hong Yeh[1,2], Binquan Wang[1,2], Terrence Oakes[1,2,3], John Graner[1,2], Hai Pan[1,2], Wei Liu[2,3], Fletcher Munter[3], Gerard Riedy[1,2,3,4]
[1]Uniformed Services University of the Health Sciences, Bethesda, MD, [2]Traumatic Brain Injury Image Analysis Lab, Henry Jackson Foundation, Rockville, MD, [3]National Capital Neuroimaging Consortium, Bethesda, MD, [4]National Intrepid Center of Excellence, Bethesda, MD

298 Switching and white matter integrity of cortico-subcortical loops in traumatic brain injury
Inge Leunissen[1], James Coxon[1], Karen Caeyenberghs[1], Monique Geurts[1], Karla Michiels[2], Stefan Sunaert[2], Stephan Swinnen[1]
[1]K.U. Leuven, Heverlee, Belgium, [2]University Hospital, Leuven, Belgium

299 Decoding fMRI Signals of Hierarchical Experiments for Assessing Disorders of Consciousness
Ranganatha Sitaram[1], Mohit Rana[2], Tao Yu[3], Simone Lang[4], Alexandra Markl[5], Dominik Vogel[5], Friedemann Mueller[5], Boris Kotchoubey[3]
[1]Institute of Medical Psychology and Behavioural Neurobiology, University of Tuebingen, Tuebingen, Germany, [2]Institute of Medical Psychology and Behavioral Neurobiology, Tuebingen, Germany, [3]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany, [4]Institute of Psychology, University of Heidelberg, Heidelberg, Germany, [5]Clinic of Neurology, Bad Aibling, Bad Aibling, Germany

300 Graph analysis of functional brain networks for cognitive control in traumatic brain injury
Karen Caeyenberghs[1], Marcus Heitger[1], Inge Leunissen[1], Monique Geurts[1], Thijs Dhollander[1], Patrick Dupont[1], Stephan Swinnen[1]
[1]KULeuven, Leuven, Belgium

301 A New MEG Low-Frequency Source Imaging Approach for Diagnosing Mild Traumatic Brain Injury
Mingxiong Huang[1,2], Sharon Nichols[1], Ashley Robb[2], Annemarie Angeles[2], Angela Drake[3], Sarah Asmussen[3], Michael Levy[4], Li Cui[1], Tao Song[1], Dewleen Baker[2,1], Paul Hammer[3], Robert Robert McLay[3], Rebecca Theilmann[1], Raul Coimbra[1], Mithun Diwakar[1], Doris Trauner[1], Thomas Liu[1], Roland Lee[1]
[1]Univ California, San Diego, San Diego, CA, [2]VA San Diego Healthcare System, San Diego, CA, [3]Naval Medical Center San Diego, San Diego, CA, [4]Rady Children's Hospital San Diego, San Diego, CA

302 Differential effects of explosive blast and post-traumatic stress disorder on cerebral white matter
Nicholas Davenport[1], Kelvin Lim[2], Scott Sponheim[3]
[1]MN Veterans Medical Research and Educ Foundation, [2]University of Minnesota, Minneapolis, MN, [3]Department of Psychiatry and the Center for Magnetic Resonance Research, University of Minnesota, Minneapolis, MN

303 How prevalent is awareness in the non-responsive brain-injured population?
Damian Cruse[1,2], Srivas Chennu[3], Camille Chatelle[4], Tristan Bekinschtein[2], Davinia Fernandez-Espejo[1], Carme Junque[5], Steven Laureys[6], Adrian Owen[1]
[1]University of Western Ontario, London, Canada, [2]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom, [3]University of Cambridge, Cambridge, United Kingdom, [4]University of Liège, Liège, Belgium, [5]University of Barcelona, Barcelona, Spain, [6]University of Liege, Belgium, Liege, Belgium

304 Automatic Multimodal Segmentation for the Clinical Assessment of Traumatic Brain Injury in 3D Slicer
Andrei Irimia[1], John Van Horn[1], Micah Chambers[2,3], Marcel Pastrawa[4,5], Sylvain Gouttard[4], Paul Vespa[6], David Hovda[7], Jeffry Alger[8,9,10], Sonja Pujol[11,12], Guido Gerig[4], Stephen Aylward[13,14], Arthur Toga[1,10], Ron Kikinis[11]
[1]Laboratory of Neuro Imaging (LONI), Department of Neurology, University of California, Los Angeles, CA, USA, [2]Laboratory of Neuro Imaging, University of California, Los Angeles, CA, USA, [3]School of Engineering and Applied Science, University of California, Los Angeles, CA, [4]Scientific Computing and Imaging Institute, University of Utah, Salt Lake City, UT, USA, [5]School of Computing, University of Utah, Salt Lake City, UT, [6]Department of Neurosurgery, University of California, Los Angeles, CA, USA, [7]Brain Injury Research Center, Department of Neurology, University of California, Los Angeles, CA, USA, [8]Department of Radiological Sciences, University of California, Los Angeles, CA, USA, [9]Brain Injury Research Center, Department of Neurosurgery and Neurology, University of California, Los Angeles, CA, [10]Brain Research Institute, Department of Neurology, University of California, Los Angeles, CA, [11]Surgical Planning Laboratory, Department of Radiology, Harvard Medical School, Boston, MA, USA, [12]Laboratory of Mathematics in Imaging, Department of Radiology, Harvard Medical School, Boston, MA, [13]Departments of Computer Science and Radiology, University of North Carolina, Chapel Hill, NC, USA, [14]Kitware, Inc., Clifton Park, NY

305 Alterations of Brain Functions during Working Memory after Moderate to Severe Traumatic Brain Injury
Jessica Clark[1], Yang Jiang[2], Seth Kiser[3], Anne Shandera-Ochsner[4], Jordan Harp[4], Chunyan Guo[5], Walter High, Jr.[4]
[1]National Rehabilitation Hospital, Washington DC, USA, [2]University of Kentucky, Lexington, United States, [3]Catholic University of America, Washington DC, DC, [4]University of Kentucky, Lexington, KY, [5]Capital Normal University, Beijing, China

306 Identification of Neuroinflammation in Mild Traumatic Brain Injuries using a Free-Water Atlas
Ofer Pasternak[1], Marek Kubicki[1], Paula Pelavin[1], Ross Zafonte[1], Martha Shenton[1], Sylvain Bouix[1]
[1]Harvard Medical School, Boston, MA

307 How many hits is too many? Toward a dose-response of head collisions as revealed in football by fMRI
Meghan Robinson[1], Thomas Talavage[2,1], Evan Breedlove[1,3], Katie Morigaki[4], Randall Benson[5], Eric Nauman[3,1], Larry Leverenz[4]
[1]Weldon School of Biomedical Engineering, Purdue University, West Lafayette, IN, [2]School of Electrical and Computer Engineering, Purdue University, West Lafayette, IN, [3]School of Mechanical Engineering, Purdue University, West Lafayette, IN, [4]Department of Health and Kinesiology, Purdue University, West Lafayette, IN, [5]Department of Neurology, Wayne State University, Detroit, MI

308 Resting-State fMRI Connectivity Analysis on a Military Traumatic Brain Injury Population
John Graner[1], Ping-Hong Yeh[1], Hai Pan[1], Binquan Wang[1], Terry Oakes[1], Wei Liu[1], Louis French[2], Fletcher Munter[3], Gerard Riedy[4]
[1]Uniformed Services University of the Health Sciences, Bethesda, MD, USA, [2]Defense and Veterans Brain Injury Center, Walter Reed Army Medical Center, Washington, DC, USA, [3]National Capital Neuroimaging Consortium, Walter Reed Army Medical Center, Washington, DC, USA, [4]National Intrepid Center of Excellence, Bethesda, MD, USA

309 Dorsal and Ventral Attention networks dysfunction as a potential mechanism of mild TBI
Serguei Astafiev[1], Nicholas Metcalf[1], Gordon Shulman[1], Maurizio Corbetta[1]
[1]Washington University School of Medicine, St. Louis, MO

310 EEG activity associated with motor inhibition in combat veterans with traumatic brain injury
Julie Onton[1], I-Wei Shu[2], Scott Matthews[2]
[1]Naval Health Research Center, [2]University of California, San Diego, San Diego, CA

311 Evidence for specific GABAergic dysfunctions in primary motor cortex after sport concussion
Sara Tremblay[1], Louis De Beaumont[2], Maryse Lassonde[1], Hugo Théoret[1]
[1]Universite de Montreal, Montreal, Canada, [2]McGill University, Montreal, Canada

312 Default Mode Network in Severe Traumatic Brain Injury
Eva Palacios-Martinez[1], Roser Sala-Llonch[2], Carme Junque[2], Teresa Roig[3], Jose Tormos[3], Nuria Bargallo[4], Pere Vendrell[5]
[1]University Of Barcelona, Barcelona, Spain, [2]University of Barcelona, Barcelona, Spain, [3]Institut Universitari de Neurorehabilitació Guttmann, Badalona, Spain, [4]Neuroradiology Unit. Imaging Diagnostic Center. Hospital Clinic Barcelona. IDIBAPS, Barcelona, Spain, [5]University of Barcelona Casanova, Barcelona, Spain

313 Extensive diffuse white matter changes following severe traumatic brain injury
Kareem Ayoub[1,2], Zili Chu[3,1], Jill Hunter[3,1], Marianne MacLeod[1], Elisabeth Wilde[1]
[1]Baylor College of Medicine, Houston, TX, [2]Rice University, Houston, TX, [3]Texas Childrens Hospital, Houston, TX

314 Disruption of the Functional Connectivity Following Mild Traumatic Brain Injury
Chandler Sours[1], Josh Betz[1], Steven Roys[1], B Aarabi[2], Kathirkamanthan Shanmuganathan[3], Joel Greenspan[4], Rao Gullapalli[5,6]
[1]University of Maryland, Baltimore, MD, [2]University of Maryland School of Medicine, Baltimore, MD, [3]University of Maryland School of Medicine, Baltimore, United States, [4]Department of Biomedical Sciences and Program in Neuroscience, University of Maryland School of Dent, Baltimore, MD, [5]University Of Maryland, Baltimore, United States, [6]Department of Diagnostic Radiology and Nuclear Medicine, University of Maryland School of Medicine, Baltimore, MD

315 Disruptions in resting state network activation in blast-related mTB
Nicole (Nikki) Fraser[1], Nicholas Davenport[2], Scott Sponheim[3]
[1]Minneapolis VA Medical Center, [2]Minnesota Veterans Research Institute, Minneapolis, MN, [3]Minneapolis VA Medical Center & Minnesota Veterans Research Institute, Minneapolis, MN

316 Activation during interference resolution and working memory after blast-related TBI
Mary Newsome[1], Randall Scheibel[2], Xiaodi Lin[1], Maya Troyanskaya[1], Joel Steinberg[3], Harvey Levin[1]
[1]Baylor College of Medicine, Houston, TX, [2]Baylor College of Medine, Houston, TX, [3]UTHSC-Houston, Houston, United States

317 FDG-PET image classification of patients with Traumatic Brain Injury
Nuria Lull[1,2], Juan J Lull[2], Enrique Noé[3], Javier García-Panach[2], Jose Manjon[2], Javier Chirivella[4], Montse Robles[2]
[1]CEU-UCH Universidad Cardenal Herrera, Valencia, Spain, [2]IBIME Research Group. Universidad Politécnica de Valencia, Valencia, Spain, [3]Servicio de Neurorehabilitación del Hospital NISA Valencia al Mar y Fundación NISA, Valencia, Spain, [4]Servicio de Daño Cerebral del Hospital NISA Aguas Vivas, Valencia, Spain

318 Using in vivo neuropathology in the diagnosis of the vegetative and the minimally conscious states
Davinia Fernandez-Espejo[1], Damian Cruse[1], Beth Parkin[1], Srivas Chennu[2], Adrian Owen[1]
[1]University of Western Ontario, London, Canada, [2]University of Cambridge, Cambridge, United Kingdom

Emotion and Motivation

Reward and Punishment

319* Striatal activity during initial processing of novel music predicts subsequent reward value, (O-W2)
Valorie Salimpoor[1], Iris van den Bosch[2], Alain Dagher[3], Robert Zatorre[4]
[1]Montreal Neurological Institute, McGill, CIRMMT, BRAMS, Montreal, QC, [2]University of Utrecht, Neuroscience and Cognition Dept, Utrecht, [3]Montreal Neurological Institute, McGill University, Montréal, QC, [4]Montreal Neurological Institute, McGill University; BRAMS; CIRMMT, Montreal, QC

320 Withdrawn

321 Risk-taking in Adolescent Brain Function and Structure
Sophia Schneider[1], Jan Peters[1], Uli Bromberg[1], Stefanie Brassen[1], Mareike Menz[1], Stephan Miedl[1], Tobias Banaschewski[2], Gareth Barker[3], Patricia Conrod[4], Herta Flor[2], Hugh Garavan[5], Andreas Heinz[6], Bernd Ittermann[7], Mark Lathrop[8], Eva Loth[4], Karl Mann[2], Jean-Luc Martinot[9], Tomas Paus[10], Jean Baptiste Poline[11], Marcella Rietschel[2], Trevor Robbins[12], Michael Smolka[13], Rainer Spanagel[2], Dai Stephens[14], Andreas Ströhle[6], Maren Struve[2], Gunter Schumann[4], Christian Büchel[1]
[1]University Medical Center Hamburg-Eppendorf, Hamburg, Germany, [2]Central Institute of Mental Health, Mannheim, Germany, [3]Institute of Psychiatry, King's College, London, United Kingdom, [4]King's College London, Institute of Psychiatry, London, United Kingdom, [5]Trinity College Dublin, Dublin, Ireland, [6]Department of Psychiatry and Psychotherapy, Charité - Universitätsmedizin Berlin, Berlin, Germany, [7]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [8]Centre National de Génotypage, Evry, France, [9]Institut National de la Santé et de la Recherche Médicale, Paris, France, [10]Rotman Research Institute, University of Toronto, Toronto, Canada, [11]CEA-I2BM-Neurospin, Paris, France, [12]University of Cambridge, Cambridge, United Kingdom, [13]Technische Universität Dresden, Dresden, Germany, [14]Department of Psychology, University of Sussex, Sussex, United Kingdom

322 Sequential Sampling Models Elucidate Neural Mechanisms of Value-based Decision Making
Sebastian Gluth[1], Jörg Rieskamp[2], Christian Büchel[1]
[1]University Medical Center, Hamburg-Eppendorf, Hamburg, Germany, [2]University of Basel, Basel, Switzerland

323 Insulin Reactivity to an Oral Glucose Tolerance Test Modulates Hedonic Hunger
Nils Kroemer[1], Lena Krebs[2], Andrea Kobiella[1], Oliver Grimm[2], Sabine Vollstaedt-Klein[2], Uta Wolfensteller[1], Ricarda Kling[1], Ulrich Zimmermann[1], Michael Smolka[1]
[1]Technische Universität Dresden, Dresden, Germany, [2]Central Institute of Mental Health, Mannheim, Germany

324 Midterm abstinence in smokers causes increases in neural reward response
Andrea Kobiella[1], Nils Kroemer[1], Mira Buehler[2], Michael Smolka[1]
[1]Technische Universität Dresden, Dresden, Germany, [2]Central Institute of Mental Health, Mannheim, Germany

325 From Animal Model to Human Brain Networking: Dynamic Causal Modeling of Motivation System Activation
Tal Gonen[1,2], Roee Admon[3,2], Ilana Podlipsky[2], Itamar Kahn[4], Talma Hendler[2,1,3]
[1]Department of Psychology, Tel-Aviv University, Tel Aviv, Israel, [2]Functional Brain Imaging Unit, Wohl Institute for Advanced Imaging, Tel-Aviv Sourasky Medical Center, Tel Aviv, Israel, [3]Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel, [4]Department of Physiology and Biophysics, Technion, Haifa, Israel

326 Differential hypothalamic responses to high and low calorie food pictures in lean subjects
Ralf Veit[1,2], Martin Heni[3], Stephanie Kullmann[1,4,2], Caroline Ketterer[3], Hans-Ulrich Haering[3], Andreas Fritsche[3], Hubert Preissl[2,5]
[1]Institute of Medical Psychology, University of Tuebingen, Tuebingen, Germany, [2]MEG-Center, University of Tuebingen, Tuebingen, Germany, [3]Department of Internal Medicine, Division of Endocrinology, Eberhard Karls University Tuebingen, Tuebingen, Germany, [4]Graduate School for Neural and Behavioural Sciences of the Max-Planck-Institute for biological Cybernetics, Tuebingen, Germany, [5]Department of Obstetrics and Gynecology, University of Arkansas for Medical Sciences, Little Rock, AR

327 Dopamine depletion affects [11C]raclopride binding potential, risk taking & gambling strategies
Crystal Erickson[1], Kevin Larcher[2], Lauren Templeton[2], Marco Leyton[3], Alain Dagher[2]
[1]Montreal Neurological Institute, McGill University, Montréal, Canada, [2]Montreal Neurological Institute, McGill University, Montréal, Quebec, [3]Department of Psychiatry, McGill University, Montréal, Quebec

328 Striatal D1 receptor density predicts individual differences in probabilistic reward learning
Sylvia Cox[1], Michael Frank[2], Lesley Fellows[1], Kevin Larcher[1], Alain Dagher[1]
[1]Montreal Neurological Institute, McGill University, Montreal, Canada, [2]Brown Institute for Brain Science, Brown University, Providence, RI

329 Distinct fMRI effects of SSRI vs DNRI antidepressants on different aspects of reward processing
Birgit Abler[1], Antonie Hartmann[1], Angela Seeringer[1], Julia Stingl[1], Martin Walter[2]
[1]University of Ulm, Ulm, Germany, [2]Otto-von-Guericke University, Magdeburg, Germany

330 Individual differences in SR modulate the activation of the ventral tegmental area
Alfonso Barros-Loscertales[1], Victor Costumero[2], Juan Carlos Bustamante[3], Noelia Ventura-Campos[4], Paola Fuentes[2], Patricia Rosell-Negre[2], César Ávila Rivera[5]
[1]University Jaume I, [2]University Jaume I, Castellón de la Plana, Spain, [3]University Jaume I, Spain, [4]Universitat Jaume I, [5]Universitat Jaume I, Castellon, Spain

331 The interaction between reward size and feedback timing on verbal working memory processes
Gillian Cooke[1], Michael Tennekoon[1], Jessica Gayda[1], James Booth[1]
[1]Northwestern University, Evanston, IL

332 The influence of weight and homeostatic signals on postprandial intrinsic brain activity
Stephanie Kullmann[1,2], Martin Heni[3], Ralf Veit[4], Caroline Ketterer[3], Hans-Ulrich Haering[3], Andreas Fritsche[3], Hubert Preissl[1,5]
[1]MEG Center, University Tuebingen, Tuebingen, Germany, [2]Graduate School for Neural and Behavioural Sciences, University of Tuebingen, Tuebingen, Germany, [3]Department of Internal Medicine, Division of Endocrinology, Eberhard Karls University Tuebingen, Tuebingen, Germany, [4]Institute of Medical Psychology, Tuebingen, Germany, [5]Department of Obstetrics and Gynecology, University of Arkansas for Medical Sciences, Little Rock, AR

333 Prenatal Exposure to Maternal Cigarette Smoking and Adolescents' Reward Processing
Kathrin Müller[1], Thomas Hübner[1], Eva Mennigen[1], Stephan Ripke[1], Sarah Rodehacke[1], Dirk Schmidt[1], Tobias Banaschewski[2], Gareth Barker[3], Christian Büchel[4], Patricia Conrod[3], Herta Flor[2], Juergen Gallinat[5], Hugh Garavan[6], Andreas Heinz[5], Bernd Ittermann[7], Eva Loth[3], Jean-Luc Martinot[8], Jean Baptiste Poline[9], Marcella Rietschel[2], Gunter Schumann[3], Maren Struve[2], Tomas Paus[10,11,12], Michael Smolka[1], the IMAGEN Consortium[3]
[1]Technische Universität Dresden, Dresden, Germany, [2]Central Institute of Mental Health, Mannheim, Germany, [3]Institute of Psychiatry, King's College London, London, United Kingdom, [4]Universitätsklinikum Hamburg Eppendorf, Hamburg, Germany, [5]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany, [6]Institute of Neuroscience, Trinity College Dublin, Dublin, Ireland, [7]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [8]Institut National de la Santé et de la Recherche Médicale, Paris, France, [9]Neurospin, Commissariat à l'Energie Atomique, Paris, France, [10]Rotman Research Institute, University of Toronto, Toronto, Canada, [11]School of Psychology, University of Nottingham, Nottingham, United Kingdom, [12]Montreal Neurological Institute, Montreal, Canada

334 An fMRI stimulus paradigm for measuring anticipation of primary rewards
John Ingeholm[1], W. Kyle Simmons[2], Seth Kallman[3], Kristina Rapuano[3], Kevin Hall[4], Alex Martin[3]
[1]National Institute of Mental Health/NIH, Bethesda, United States, [2]Laureate Institute For Brain Research, Tulsa, OK, [3]National Institute of Mental Health/NIH, Bethesda, MD, [4]NIDDK/NIH, Bethesda, MD

335 Coupling between cognitive networks associated with symptoms of compulsive binge eating
David Cole[1], Christian Beckmann[2], Anne Andorn[3], Massimo Bani[3], Pradeep Nathan[4], Edward Bullmore[5], Paul Matthews[1], Eugenii Rabiner[1], John Beaver[6]
[1]Imperial College London, London, United Kingdom, [2]Donders Centre for Cognitive Neuroimaging, Nijmegen, Netherlands, [3]Neuroscience Centre of Excellence for Drug Discovery, GlaxoSmithKline, Research Triangle Park, NC, [4]Clinical Unit Cambridge, GlaxoSmithKline, Cambridge, United Kingdom, [5]University Of Cambridge Brain Mapping Unit, Cambridge, United Kingdom, [6]Clinical Imaging Centre, GlaxoSmithKline, London, United Kingdom

336 Serotonin is involved in processing negative outcomes caused by low-risk decisions
Julian Macoveanu[1], Bettina Hornboll[1], Gitte Knudsen[2], Olaf B. Paulson[3], James Rowe[4], Hartwig Siebner[5]
[1]Danish Research Center for Magnetic Resonance, Hvidovre, Denmark, [2]Center for Integrated Molecular Brain Imaging, Copenhagen, Denmark, [3]Copenhagen University Hospital Hvidovre, Hvidovre, Denmark, [4]Cambrdge University Neurology Unit, Cambridge, United Kingdom, [5]Danish Research Centre for Magnetic Resonance, Hvidovre, Denmark

337 Reward Sensitivity in a Sample of Healthy Adolescents
Frauke Nees[1], Jelka Tzschoppe[1], Sabine Vollstaedt-Klein[1], Sabina Steiner[1], Luise Poustka[1], Tobias Banaschewski[1], Gareth Barker[2], Christian Büchel[3], Patricia Conrod[4], Hugh Garavan[5], Andreas Heinz[6], Mark Lathrop[7], Karl Mann[1], Jean-Luc Martinot[8], Tomas Paus[9], Jean-Baptiste Poline[10], Trevor Robbins[11], Marcella Rietschel[1], Michael Smolka[12], Rainer Spanagel[1], Dai Stephens[13], Andreas Ströhle[14], Maren Struve[1], Eva Loth[4], Gunter Schumann[4], Herta Flor[1]
[1]Central Institute of Mental Health, Mannheim, Germany, [2]Institute of Psychiatry, King's College, London, United Kingdom, [3]University Medical Center Hamburg-Eppendorf, Hamburg, Germany, [4]King's College London, Institute of Psychiatry, London, United Kingdom, [5]Trinity College Institute of Neuroscience, Dublin, Ireland, [6]Charité – Universitätsmedizin Berlin, Berlin, Germany, [7]Centre National de Génotypage, Evry, France, [8]Institut National de la Santé et de la Recherche Médicale, Paris, France, [9]Rotman Research Institute, University of Toronto, Toronto, Canada, [10]CEA-I2BM-Neurospin, Paris, France, [11]University of Cambridge, Cambridge, United Kingdom, [12]Technische Universität Dresden, Dresden, Germany, [13]University of Sussex, Sussex, United Kingdom, [14]Campus Charité, Universitätsmedizin Berlin, Berlin, Germany

338 Elevated fMRI responses when winning a human vs. a computer opponent in a video game
Jari Kätsyri[1], Niklas Ravaja[1], Lauri Nummenmaa[2]
[1]CKIR, Aalto University School of Economics, Helsinki, Finland, [2]Brain Research Unit, Low Temperature Laboratory, Aalto University School of Science, Espoo, Finland

339 Brain regions involved in aversion-related processing: A cross-species translational investigation
Dave Hayes[1], Georg Northoff[2]
[1]University of Ottawa, Institute of Mental Health Research, Canada, [2]University of Ottawa Institute of Mental Health Research, Ottawa, Canada

340 Nucleus Accumbens is Selectively Activated by Reward Outcomes Compared to Loss Outcomes
Daniel Hommer[1], Ashely Smith[1], Jodi Gilman[1], Reza Momenan[1]
[1]NIAAA/NIH, Bethesda, MD

341 Reward processing in major depressive disorder and obsessive-compulsive disorder: an fMRI study
Bart de kwaasteniet[1], Damiaan Denys[2], Juilan Garcia Barnet[2], Judy Luigjes[2], Martijn Figee[2], Matthijs Vink[3]
[1]Academic Medical Centre Amsterdam, [2]Academic Medical Centre Amsterdam, Amsterdam, Netherlands, [3]Rudolf Magnus Institute of Neuroscience, Utrecht, Netherlands

342 FMRI evidence of involvement of the endocannabinoid system in human reward processing
Hendrika van Hell[1], Matthijs Bossong[1], Gerry Jager[2], Nick Ramsey[1], Johan Jansma[1]
[1]Rudolf Magnus Institute of Neuroscience, UMC Utrecht, Utrecht, Netherlands, [2]Division of Human Nutrition, Wageningen University, Wageningen, Netherlands

343 Processing of social reward and punishment differentially involves the neural reward circuitry
Henk Cremers[1], Ilya Veer[1], Philip Spinhoven[1], Serge Rombouts[2], Karin Roelofs[3]
[1]Leiden Institute for Brain and Cognition (LIBC), Leiden, Netherlands, [2]Leiden University Medical Center, Leiden, Netherlands, [3]Behavioral Science Institute (BSI), Nijmegen, Netherlands

344 The Modulatory Influence of Motivational Salience within the Mesocorticolimbic System: A DCM Study
David Blitzer[1], Sam Colalillo[1], M Ryan Haynes[1], Joseph Barter[1], Daniel Weinberger[1], Caroline Zink[1]
[1]National Institute of Mental Health, National Institutes of Health, Bethesda, MD

345 BDNF Val66Met polymorphism modulates BOLD response to reward and loss predicting emotional cues
Tiffany Nash[1], Mbemba Jabbi[1], Philip Kohn[1], Brett Cropp[1], Jonathan Kippenhan[1], Bhaskar Kolachana[1], Daniel Weinberger[1], Karen Berman[1]
[1]National Institutes of Mental Health, NIH, Bethesda, MD

346 DAT1 moderates the relationship between reward-circuitry responsivity and impulsivity in adolescents
Yannis Paloyelis[1], Mitul Mehta[1], Stephen Faraone[2], Philip Asherson[1], Jonna Kuntsi[1]
[1]King's College London, London, United Kingdom, [2]Department of Psychiatry, Harvard Medical School, Massachusetts General Hospital, Boston, MA

347 Midbrain and medial orbital cortex response to milkshake predicts ad lib milkshake intake
Sarah Nolan-Poupart[1], Maria Veldhuizen[2], Dana Small[3]
[1]The John B. Pierce Laboratory, New Haven, CT, [2]The John B. Pierce Laboratory and Yale University School of Medicine, New Haven, CT, [3]The John B Pierce Laboratory and Yale University School of Medicine, New Haven, CT

348 Unconfounding Reward and Motivational Salience in the Ventral Striatum During Reward Anticipation
Sam Colalillo[1], David Blitzer[1], Joseph Barter[1], M Ryan Haynes[1], Daniel Weinberger[1], Caroline Zink[1]
[1]National Institute of Mental Health, National Institutes of Health, Bethesda, MD

349 Effects of Fructose and Glucose on Brain Feeding Centers: a fMRI Study in Obese Adolescents
Saima Malik[1], Jessica Kubat[1], jagriti Arora[1], Robert Sherwin[1], R. Todd Constable[2], Sonia Caprio[1]
[1]Yale University, New Haven, CT, [2]Department of Diagnostic Radiology; Department of Biomedical Engineering, Yale University, New Haven, CT

350 Neural circuitry of reward processing in frequent marijuana users investigated with fMRI
Kristen Ford[1], Jean Théberge[1], R Neufeld[1], Peter Williamson[1], Elizabeth Osuch[1]
[1]University of Western Ontario, London, Ontario

351 Psychosocial problems and mesolimbic recruitment by potential rewards in healthy adolescents
James Bjork[1], Ashley Smith[2], Gang Chen[3], Daniel Hommer[4]
[1]NIDA/NIH, Bethesda, [2]Temple University, Philadelphia, PA, [3]SSCC/DIRP/NIMH, National Institutes of Health, USA, [4]NIAAA/NIH, Bethesda, United States

352 The Impact of Previous Outcomes on the Neural Coding of Expectation
Uli Bromberg[1], Jan Peters[2], Sophia Schneider[1], Mareike Menz[1], Stefanie Brassen[1], Thomas Banachewski[3], Gareth Barker[4], Patricia Conrod[5], Herta Flor[3], Juergen Gallinat[6], Hugh Garavan[7], Andreas Heinz[8], Bernd Ittermann[9], Mark Lathrop[10], Eva Loth[5], Karl Mann[3], Jean-Luc Martinot[11], Tomas Paus[12], Jean Baptiste Poline[13], Trevor Robbins[14], Marcella Rietschel[8], Michael Smolka[15], Rainer Spanagel[8], Dai Stephens[16], Maren Struve[3], Gunter Schumann[5], Christian Büchel[2]
[1]Deparment of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Germany, Hamburg, Germany, [2]NeuroimageNord, Institute for Systems Neuroscience, University-Medical Center Hamburg-Eppendorf, Ger, Hamburg, Germany, [3]Central Institute of Mental Health, Mannheim, Germany, [4]Institute of Psychiatry, King's College, London, United Kingdom, [5]King's College London, Institute of Psychiatry, London, United Kingdom, [6]Charite Universitaetsmedizin Berlin, Berlin, Germany, [7]Trinity College Institute of Neuroscience, Dublin, Ireland, [8]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany, [9]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [10]Centre National de Génotypage, Evry, France, [11]Institut National de la Santé et de la Recherche Médicale, Paris, France, [12]Rotman Research Institute, University of Toronto, Toronto, Canada, [13]CEA-I2BM-Neurospin, [14]University of Cambridge, Cambridge, United Kingdom, [15]Technische Universität Dresden, Dresden, Germany, [16]Department of Psychology, University of Sussex, Sussex, United Kingdom

353 Being released from self-presentation is a reward to a person with high public self-consciousness
Tomoko Totsune[1], Atsushi Sekiguchi[2], Yukihito Yomogida[2,3], Motoaki Sugiura[2], Ryuta Kawashima[2]
[1]Tohoku University School of Medicine, Sendai, Japan, [2]Dept. FBI, IDAC, Tohoku University, Sendai, Japan, [3]JSPS, Tokyo, Japan

Emotion and Motivation

Sexual Behavior

354 Differential activation patterns associated with sexual arousal in pre- and post-menopausal women
Gwang-Woo Jeong[1], Han-Su Baek[2], Heoung-Keun Kang[3]
[1]Chonnam National University Medical School, Gwang-Ju, Republic of Korea, [2]Chonnam National University, Gwang-Ju, Republic of Korea, [3]Chonnam National University Medical School, Gwang-Ju, Republic of Korea

355 Evidence of brain volume changes in sex offenders from voxel-based morphometry
Irene Hsu[1], I-Yun Chen[2], Kun-Hsien Chou[3], Ching-Po Lin[4]
[1]Institute of Brain Science, National Yang Ming University, Taipei, Taiwan- Republic Of China, [2]Institute Of Neuroscience, NYMU, Taiwan- Republic Of China, [3]National Yang Ming University, Taiwan- Republic Of China, [4]National Yang-Ming University, Taipei, Taiwan- Republic Of China

356 Selective brain network modifications during erotic visual stimulation in erectile dysfunction
Nicoletta Cera[1], Ezio Di Pierro[2], Gianna Sepede[1], Carlo Vicentini[2], Giuseppe Galatioto Paradiso[2], Armando Tartaro[1], Cosimo Del Gratta[1], Gian Luca Romani[1], Antonio Ferretti[1]
[1]ITAB- Department of Neuroscience - G.D'Annunzio University Of Chieti, Chieti, Italy, [2]G. Mazzini Hospital-University of L'Aquila, Teramo, Italy

Higher Cognitive Functions

Executive Function

357* Fronto-Parietal Connections are Modulated by Cognitive Control and Working Memory: A DCM Study, (O-M2)
Ian Harding[1], Murat Yucel[2], Ben Harrison[3], Christos Pantelis[4], Michael Breakspear[5]
[1]University of Melbourne, Melbourne, Australia, [2]Univ. of Melbourne - Sunshine Hospital, St. Albans VIC, Australia, [3]The University of Melbourne, Melbourne, Victoria, [4]Melbourne Neuropsychiatry Centre, University of Melbourne, Melbourne, Australia, [5]Queensland Institute of Medical Research, Brisbane, Australia

358* Competition and inhibition in human voluntary action selection, (O-M2)
Jiaxiang Zhang[1], Laura Hughes[1], James Rowe[2]
[1]MRC cognition and brain science unit, Cambridge, United Kingdom, [2]Cambrdge University Neurology Unit, Cambridge, United Kingdom

359 FMRI task parameters influence hemodynamic activity in regions implicated in cognitive set-shifting**
Suzanne Witt[1], Godfrey Pearlson[2,3,4], Michael Stevens[3,4]
[1]Olin Neuropsychiatry Research Center, Hartford, United States, [2]Hartford Hospital, Hartford, CT, [3]Olin Neuropsychiatry Research Center, Hartford, CT, [4]Department of Psychiatry, Yale University, New Haven, CT

360 An fMRI study of impulsivity – the monetary incentive delay STOP Task
Brendan Behan[1], Adam Stone[1], Hugh Garavan[1]
[1]Trinity College Institute of Neuroscience, Dublin, Ireland

361 Association between brain laterality and cognitive ability: An fMRI study
Joanne Powell[1], Marta Garcia-Finana[2], Graham Kemp[2]
[1]University Of Liverpool, United Kingdom, [2]University of Liverpool, Liverpool, United Kingdom

362 Neural subprocesses of proactive inhibition
Matthijs Vink[1], Mirjam Bloemendaal[1], Bram Zandbelt[1], René Kahn[2]
[1]Rudolf Magnus Institute of Neuroscience, Utrecht, Netherlands, [2]Rudolf Magnus Institute of Neuroscience, University Medical Center Utrecht, Utrecht, Netherlands

363 The effects of prefrontal stimulation on stop-signal response inhibition: a combined fMRI/TMS study
Bram Zandbelt[1], Mirjam Bloemendaal[1], René Kahn[1], Matthijs Vink[1]
[1]Rudolf Magnus Institute of Neuroscience, Utrecht, Netherlands

364 Laterality of Cognitive Control: Does It Depend on Language Laterality?
Qing Cai[1], Lise Van der Haegen[2], Marc Brysbaert[2]
[1]Ghent University, Gent, Belgium, [2]Ghent University, Ghent, Belgium

365 How sensory anticipations in the human brain control motor action
Roland Pfister[1,2], Tobias Melcher[2], Andrea Kiesel[1], Peter Dechent[3], Oliver Gruber[2]
[1]University of Würzburg, Würzburg, Germany, [2]Goettingen University, Germany, Goettingen, Germany, [3]MR-Research in Neurology and Psychiatry, University Medical Center Goettingen, Goettingen, Germany

366 Medial Prefrontal Specialization for Conflict Processing Revealed by a Novel Auditory Stroop Task
Thomas Christensen[1], Kyle Almryde[1], Julie Lockwood[1], Elena Plante[1]
[1]University of Arizona, Tucson, United States

367 Is there "one" DLPFC in motor control? Evidence from connectivity-based parcellation
Edna-Clarisse Cieslik[1], Karl Zilles[1], Svenja Caspers[1], Christian Roski[1], Tanja Kellermann[2], Oliver Jakobs[2], Witali Pomjanski[3], Robert Langner[2], Angela R. Laird[4], Peter Fox[4], Simon Eickhoff[2]
[1]Institute of Neuroscience and Medicine, INM-2, Research Centre Jülich, Juelich, Germany, [2]Dept. of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [3]C. and O. Vogt Institute for Brain Research, University of Duesseldorf, Duesseldorf, Germany, [4]University Of Texas Health Science Center At San Antonio, San Antonio, United States

368 Overcoming high stimulus-response interference in mental set-shifting requires cognitive control
Suzanne Witt[1], Godfrey Pearlson[2,3,4], Michael Stevens[1,4]
[1]Olin Neuropsychiatry Research Center, Hartford, United States, [2]Hartford Hospital, Hartford, CT, [3]Olin Neuropsychiatry Research Center, Hartford, CT, [4]Department of Psychiatry, Yale University, New Haven, CT

369 Conflict-related activity in PFC is modulated by individual differences in action orientation
Stefanie Beck[1], Hannes Ruge[1], Thomas Goschke[1]
[1]Technische Universität Dresden, Dresden, Germany

370 Fitness, cognition, and basal ganglia volumes in older adults
Destiny Miller[1], Kirk Erickson[1], Ruchika Prakash[2], Michelle Voss[3], Chandramallika Basak[4], Jenny Kim[5], Laura Chaddock[3], Amanda Szabo[6], Emily Mailey[6], Siobhan White[6], Thomas Wojcicki[6], Edward McAuley[6], Art Kramer[6]
[1]Psychology Department, University of Pittsburgh, Pittsburgh, PA, [2]Psychology Department, Ohio State University, Columbus, OH, [3]Department of Psychology and Beckman Institute, University of Illinois at Urbana-Champagne, Urbana-Champagne, IL, [4]Department of Psychology, Rice University, Houston, TX, [5]Neuroscience Program, University of Illinois at Urbana-Champagne, Urbana-Champagne, IL, [6]Department of Kinesiology and Community Health, University of Illinois at Urbana-Champagne, Urbana-Champagne, IL

371 Response inhibition reflects striatal dopamine receptor availability and BOLD signal
Dara Ghahremani[1], Buyean Lee[1], Golnaz Tabibnia[2], Amira Brown[1], Natalie DeShetler[1], John Monterosso[3], Russell Poldrack[4], Edythe London[5]
[1]UCLA, Los Angeles, CA, [2]Carnegie Mellon University, Pittsburgh, United States, [3]University of Southern California, Los Angeles, CA, [4]University of Texas at Austin, Austin, United States, [5]Departments of Psychiatry and Molecular and Medical Pharmacology, University of California Los Angel, Los Angeles, CA

372 Common and distinct resting-state functional connectivity in monolingual and bilingual older adults
Gigi Luk[1], Charisa Ng[1], Ellen Bialystok[2], Fergus Craik[3], Cheryl Grady[3]
[1]Rotman Research Institute at Baycrest, Toronto, ON, [2]York University & Rotman Research Institute at Baycrest, Toronto, ON, [3]Rotman Research Institute at Baycrest & University of Toronto, Toronto, ON

373 Anterior cingulate glutamate levels differentially modulate BOLD response to cognitive conflict
Liv Falkenberg[1], Rene Westerhausen[1], Karsten Specht[1,2], Kenneth Hugdahl[1,3]
[1]Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway, [2]Department of Clinical Engineering, Haukeland University Hospital, Bergen, Norway, [3]Division of Psychiatry, Haukeland University Hospital, Bergen, Norway

374 Context-driven adaptation of human response conflict via the dorsomedial prefrontal cortex
Guillermo Horga[1], Pengwei Wang[2], Tiago Maia[3], Zhishun Wang[2], Rachel Marsh[3], Bradley Peterson[4]
[1]New York, United States, [2]Columbia University, New York , NY, [3]Columbia University, New York, NY, [4]Columbia University, New York , New York

375 Age effects in working memory processes and related neural activity
Susanne Karch[1], Gregor Leicht[2], Ina Giegling[3], Jürgen Lutz[4], Thomas Meindl[5], Oliver Pogarell[3], Ulrich Hegerl[6], Dan Rujescu[3], Christoph Mulert[7]
[1]Department of Psychiatry and Psychotherapy, Munich, Germany, [2]Department of Psychiatry, UKE Hamburg, Hamburg, Germany, [3]Department of Psychiatry, Munich, Germany, [4]Institute of Clinical Radiology, Ludwig-Maximilians-University, Munich, Germany, [5]University Munich, Munich, Germany, [6]Department of Psychiatry, Leipzig, Germany, [7]Department of Psychiatry, Hamburg, Germany

376 Neural Correlates of the Volitional Regulation of the Desire for Food
Maurice Hollmann[1], Lydia Hellrung[1], Stefan Kabisch[2], Haiko Schlögl[2], Michael Stumvoll[3,4], Arno Villringer[1,5,6,7], Burkhard Pleger[1,5,6,7], Annette Horstmann[1,5]
[1]Dept. Neurology, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Clinic of Endocrinology, University Hospital Leipzig, Leipzig, Germany, [3]IFB Adiposity Diseases, University of Leipzig, Leipzig, Germany, [4]Clinic of Endocrinology, University Hospital Leipzig, Leizig, Germany, [5]IFB Adiposity Diseases, University of Leipzig, Leizig, Germany, [6]Clinic for Cognitive Neurology, University Hospital Leipzig, Leizig, Germany, [7]Mind & Brain Institute, Berlin School of Mind and Brain, Humboldt-University and Charité, Berlin, Germany

377 Sex differences in the impact of early life stress on the neural processing of behavioral errors
Amanda Elton[1], Timothy Ely[2], Clint Kilts[3], Tanja Mletzko[2]
[1]University of Arkansas for Medical Sciences, [2]Emory University, Atlanta, GA, [3]University of Arkansas for Medical Sciences, Little Rock, AR

378 The impact of age and education on verbal fluency: behavioral and fMRI correlates
ROCHELE FONSECA[1], Karine Marcotte[2], Daniel Adrover-Roig[3], Lilian Scherer[4], Yannick Marsolais[5], Tânia Netto[6], Denise Greca[7], Eduardo Curty[8], Romeu Domingues[9], Bernardo Bizzo[7], Thomas Döring[10], Jesus Landeira-Fernandez[11], Emerson Gasparetto[12], Yves Joanette[13], Ana Inés Ansaldo[14]
[1]CRIUGM, Université de Montreal; Human Cognition, PUCRS, Porto Alegre, Brazil, [2]CRIUGM, Université de Montréal, Montreal, Canada, [3]Centre de Recherche de l'Institut Universitaire de Gériatrie de Montréal, Montreal, Canada , [4]Psycholinguistics Department, PUCRS, Porto Alegre, Brazil, [5]CRIUGM, UNiversité de Montreal, Montreal, Canada, [6]Federal University of Rio de Janeiro, UFRJ, Rio de Janeiro, Brazil, [7]Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil, [8]Clinics Multi-Imagem and CDPI - Clínica de Diagnóstico por Imagem, Rio de Janeiro, Brazil, [9]CDPI, Rio de janeiro, Brazil, [10]Federal University of Rio de Janeiro (UFRJ); CDPI, Rio de Janeiro, Brazil, [11]Pontifical Catholic University of Rio de Janeiro (PUC-Rio), Rio de Janeiro, Brazil, [12]UFRJ / CDPI, Rio de Janeiro, Brazil, [13]Centre de recherche de l'Institut universitaire de gériatrie de Montréal and Université de Montréal, Montreal, Quebec, [14]CRIUGM, Montreal, Canada

379 Neural correlates of the Simon effect and its reversal in Hedge and Marsh tasks
Ling Wang[1], Xiaokun Xu[2], Xiaolin Zhou[3]
[1]Division of Speech and Hearing Sciences, Faculty of Education, The University of Hong Kong, Hong Kong, China, [2]Department of Biological Science and Medical Engineering, Southeast University, Nanjing, China, [3]Department of Psychology, Peking University, Beijing, China

380 An event-related fMRI investigation of hand asymmetries in ideomotor processing
Tobias Melcher[1], Bernhard Hommel[2], Dorina Winter[3], Roland Pfister[4], Peter Dechent[5], Oliver Gruber[6]
[1]Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Goettingen, Germany, [2]Institute for Psychological Research & Leiden Institute for Brain and Cognition, Leiden University, Leiden, The Netherlands, [3]Department of Psychosomatic Medicine and Psychotherapy, Central Institute for Mental Health, Mannhei, Mannheim, Germany, [4]University of Würzburg, Würzburg, Germany, [5]MR-Research in Neurology and Psychiatry, University Medical Center GÃ¶ttingen, Goettingen, Germany, [6]Centre for Translational Research in Systems Neuroscience and Clinical Psychiatry, Department of Psy, Goettingen, Germany

381 Distinct dorsal and ventral lateral prefrontal networks evident in resting-state connectivity
Robert Blumenfeld[1], Emi Nomura[1], Caterina Gratton[1], Daniel Bliss[1], Mark D'Esposito[1]
[1]Helen Wills Neuroscience Institute, UC Berkeley, Berkeley, CA

382 Learning and lapsing: Sequential effects during conflict processing
Heike Eichele[1], Hilde Juvodden[1], Marius Worren[1], Jan Wessel[2], Kenneth Hugdahl[3], Markus Ullsperger[4], Tom Eichele[1]
[1]University of Bergen, Bergen, Norway, [2]MPI for neurological research, Cologne, Germany, [3]Division of Psychiatry and Bergen Mental Health Center, Haukeland University Hospital, Bergen, Norway, [4]MPI F. Neurological Research, Cologne, Germany

383 Task-Related Top-Down Control in Response Switching from Granger Causality Mapping of fMRI Data
Ian Cameron[1], Mark D'Esposito[1], Douglas Munoz[2]
[1]Helen Wills Neuroscience Institute, UC Berkeley, Berkeley, CA, USA, [2]Centre for Neuroscience Studies and Department of Physiology, Queen's University, Kingston, ON, Canada

384 Resting-state cognition is associated with executive network activation
Diederick Stoffers[1], Alexander Diaz[2], Anouk den Braber[2], Dorret Boomsma[2], Huibert Mansvelder[2], Eco de Geus[2], Eus van Someren[1], Klaus Linkenkaer-Hansen[2]
[1]Netherlands Institute for Neuroscience, Amsterdam, The Netherlands, [2]Neuroscience Campus Amsterdam, VU University, Amsterdam, The Netherlands

385 Effects of Acute Nicotine on Neural Activity During Response Inhibition in Impulsive Individuals
Alexandra Potter[1], Emily Mazzulla[1], Sarahjane Dube[1], Paul Newhouse[1]
[1]University of Vermont, Vermont, USA

386 Hippocampal-cortical connectivity during implicit and explicit encoding of visual information
Katherine Roe[1], Philip Kohn[1], Karen Berman[1]
[1]NIMH,NIH, Bethesda, United States

387 Brain networks underlying reward processing and inhibitory control in adolescence and adulthood
Michael Hallquist[1], Charles Geier[1], Beatriz Luna[1]
[1]University of Pittsburgh, Pittsburgh, PA

388 The role of dopaminergic variation in the prefrontal cortex on proactive control
Sara Jahfari[1], Frederick Verbruggen[2], Lorenza Colzato[3], K. Ridderinkhof[1], Birte Forstmann[1]
[1]University of Amsterdam, Amsterdam, Netherlands, [2]University of Exeter, Exeter, England, [3]University of Leiden, Leiden, Netherlands

389 Cellular activity in the frontal lobe during discrimination of emotional faces and vocalizations
Maria Diehl[1], Mark Diltz[1], Lizabeth Romanski[1]
[1]University of Rochester, Rochester, NY

390 The response inhibition load dependent activity: a functional MRI study
Hisakazu Yanaka[1,2], Daisuke Saito[1,2], Takanori Kochiyama[3], Takeshi Fujii[2], Hirotaka Kosaka[4,2], Taisuke Shimada[5,2], Hidehiko Okazawa[2,1]
[1]Research and Education Program for Life Science, University of Fukui, Fukui, Japan, [2]Biomedical Imaging Research Center, University of Fukui, Fukui, Japan, [3]Brain Activity Imaging Center, ATR-Promotions, Advanced Telecommunications Research Institute, Kyoto, Japan, [4]Department of Neuropsychiatry, Faculty of Medical Sciences, University of Fukui, Fukui, Fukui, [5]Faculty of Engineering, University of Fukui, Fukui, Japan

391 Brain Mechanisms Associated with Meditation-Induced Regulation of Anxiety
Fadel Zeidan[1], John McHaffie[1], Robert Kraft[1], Katherine Martucci[1], Robert Coghill[2]
[1]Wake Forest University School of Medicine, Winston-Salem, United States, [2]Wake Forest University School of Medicine, Winston-Salem, United States

392 Toward a Functional Characterization of Cognitive Control Networks
Frederick Ezekiel[1], J Bruce Morton[2]
[1]University Of Western Ontario, Canada, [2]University of Western Ontario, London, Ontario

393 Remembering and ignoring faces: A real-life alternative to the Stroop?
Stefanie Biehl[1], Tim Hahn[1], Thomas Dresler[1], Claudia Saathoff[1], Christian Jacob[1], Jürgen Deckert[1], Martin Herrmann[1]
[1]Department of Psychiatry, University of Würzburg, Würzburg, Germany

394 Exploring the diversity of cognitive control phenomena via brain-behaviour correlations
Eva Mennigen[1], Sarah Rodehacke[1], Thomas Hübner[1], Kathrin Müller[1], Stephan Ripke[1], Dirk Schmidt[1], Hannes Ruge[1], Thomas Goschke[1], Michael Smolka[1]
[1]Technische Universität Dresden, Dresden, Germany

395 Imitation vs. spatial compatibility: Similar activation levels with distinct functional connectivity
Katy Cross[1], Marco Iacoboni[2]
[1]UCLA Neuroscience Interdepartmental Graduate Program, UCLA Medical Scientist Training Program, Los Angeles, CA, [2]UCLA Brain Mapping Center, Los Angeles, CA

396 FMRI Investigation of Interactions between Impulse Control and Emotional Context
Matthew Brown[1], Serdar Dursun[1], Alan Wilman[1], Andrew Greenshaw[1]
[1]University of Alberta, Edmonton, AB, Canada

397 Switch and Restart Costs in the Bilingual Brain
Ana Sanjuán[1], Aina Rodríguez[1], Noelia Ventura-Campos[2], Patricia Román[3], Albert Costa[4], Maria Antònia Parcet[1], César Ávila Rivera[2]
[1]Universitat Jaume I, Castellón, Spain, [2]Universitat Jaume I, Castellon, Spain, [3]Max Planck Institute for Human Cognitive and Brain Sciences Minerva Research Group, Leipzig, Germany, [4]Pompeu Fabra University, Barcelona, Spain

398 Modulating Effect of COMT Genotype on the Brain Regions underlying Inhibition
Mathieu Jaspar[1], Julien Grandjean[1], Eric Salmon[2], Pierre Maquet[2], Fabienne Collette[1]
[1]Cyclotron Research Centre and Cognitive and Behavioral Neuroscience Centre, University of Liège, Liège, Belgium, [2]Cyclotron Research Centre, University of Liège, Liège, Belgium

399 Musical and bilingual experience on neuromagnetic activity during cognitive control
Takako Fujioka[1], Ellen Bialystok[2], Fergus Craik[1], Anne-Marie De Pape[3,4], Laurel Trainor[3,1], Bernhard Ross[1]
[1]Rotman Research Institute at Baycrest, Toronto, Ontario, [2]York University & Rotman Research Institute at Baycrest, Toronto, Ontario, [3]McMaster University, Hamilton, Ontario, [4]York University, Toronto, Ontario, Canada

400 The posterior cingulate BOLD duty cycle during meditation predicts attentional skills
Giuseppe Pagnoni[1]
[1]University of Modena and Reggio Emilia, Modena, Italy

401 Neural Basis of Semantic and Syntactic Interference Resolution in Sentence Comprehension
Yi Guo[1], Randi Martin[1], A Hamilton[1], Julie Van Dyke[2], Yingying Tan[1]
[1]Rice University, Houston, TX, [2]Haskins Laboratories, New Haven, CT

402 Neural correlates of performance monitoring while using a brain-computer interface (BCI)
Margaux Perrin[1,2], Emmanuel Maby[3,2], Romain Bouet[1,2,4], Olivier Bertrand[3,2], Jérémie Mattout[3,2]
[1]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Brain Dynamics and Cognition Team, Lyon, France, [2]University Lyon 1, Lyon, France, [3]INSERM, U821, Brain Dynamics And Cognition, Lyon, France, [4]Neurological hospital, functional neurology and epileptology dept, Lyon, France

403 Correlation between frontal cortical thickness and executive functions in patients with HIV+
ROCHELE FONSECA[1], Tânia Netto[2], Thomas Döring[3], Denise Greca[4], Bernardo Bizzo[4], Rafael Ferracini[5], Emerson Gasparetto[6]
[1]Human Cognition, PUCRS, Porto Alegre, Brazil, [2]Federal University of Rio de Janeiro, UFRJ, Rio de Janeiro, Brazil, [3]Federal University of Rio de Janeiro (UFRJ); CDPI, Rio de Janeiro, Brazil, [4]Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil, [5]Federal University of Rio de Janeiro, Rio de Janeiro, Brazil, [6]UFRJ / CDPI, Rio de Janeiro, Brazil

404 Set-maintenance fronto-striatal activity depends on the number of trials since the last set-shift
Jean-Sebastien Provost[1], France Simard[1], Oury Monchi[1]
[1]University of Montreal, Montreal, Canada

405 Neural correlates of alcohol-induced disinhibition
Michael Smolka[1], Gabriela Gan[1], Michael Marxen[1], Andrea Kobiella[1], Christine Zimmermann[1], Maximilian Pilhatsch[1], Eva Mennigen[1], Ulrich Zimmermann[1]
[1]Technische Universität Dresden, Dresden, Germany

406 Non-meditators have more brain activation than regular meditators in an attentional task
Elisa Kozasa[1,2], Joao Sato[3], Shirley Lacerda[4], Maria Barreiros[5], Joao Radvany[6], Tamara Russell[7], Liana Sanches[1], Edson Amaro[8], Luiz Mello[9]
[1]Instituto do Cerebro-Instituto Israelita de Ensino e Pesquisa Albert Einstein, Sao Paulo, Brazil, [2]Dept of Psychobiology- Universidade Federal de Sao Paulo, Sao Paulo, Brazil, [3]Universidade Federal do ABC, Sao Paulo, Brazil, [4]Instituto do Cerebro-Instituto Israelita de Ensino e Pesquisa Albert Einstein, Sao Paulo, SP, [5]Instituto do Cerebro- Instituto Israelita de Ensino e Pesquisa Albert Einstein, Sao Paulo, Brazil, [6]Hospital Israelita Albert Einstein, Sao Paulo, Brazil, [7]6King's College London, Institute of Psychiatry, London, United Kingdom, [8]University Of Sao Paulo, Sao Paulo, SP, Brazil, [9]Dept of Physiology-Universidade Federal de Sao Paulo, Sao Paulo, Brazil

407 Improving the Definition of Multiple Demand Cortex
Ben Crittenden[1,2], John Duncan[3], Russell Thompson[3]
[1]MRC CBU, [2]University of Cambridge, Cambridge, United Kingdom, [3]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom

408 Withdrawn

409 Source localization of cognitive inhibition in college students with schizotypal traits
Kyoung-Mi Jang[1], Sung Hwa Oh[2], Myung-Sun Kim[2]
[1]Department of Psychology, Sungshin Wommen's University, seoul, Korea,Republic of, [2]Department of Psychology, Sungshin Women's University, Seoul, Korea, Republic of

410 Voluntary selection in adult patients with ADHD: a single trial study
Susanne Karch[1], Julia Völker[1], Matthias Ertl[2], Tobias Thalmeier[3], Gregor Leicht[4], Kristina Hennig-Fast[5], Thomas Meindl[6], Oliver Pogarell[7], Christoph Mulert[8]
[1]Department of Psychiatry and Psychotherapy, Munich, Germany, [2]University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy, Hamburg, Germany, [3]Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University Munich, Munich, Germany, [4]Department of Psychiatry, UKE Hamburg, Hamburg, Germany, [5]Department of Psychiatry and Psychotherapy, Ludwig-Maximilian University, Munich, Germany, [6]University Munich, Munich, Germany, [7]Department of Psychiatry, Munich, Germany, [8]Department of Psychiatry, Hamburg, Germany

411 Individual differences in behavioural and brain correlates of selective attention to pain-related information in healthy individuals
Adina Mincic[1,2]
[1]Toronto Western Research Institute, Toronto, Canada, [2]University of Oradea, Oradea, Romania

412 Functional neuroimaging of attentional set-shifting in children born preterm
Ilyse Lax[1], Kathleen Mak-Fan[2], Wayne Lee[2], Sarah Lin Yao[2], Elizabeth Donner[2], Margot Taylor[2]
[1]University of Toronto, Toronto Ontario, [2]The Hospital for Sick Children, Toronto, Ontario

413 Cognitive Behavioral Therapy increases prefrontal activity in patients with chronic pain
Karin Jensen[1], Rikard Wicksell[2], Mike Kemani[2], Julia Merle[3], Diana Kadetoff[2], Eva Kosek[2], Martin Ingvar[2]
[1]Massachusetts General Hospital, Charlestown, United States, [2]Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden, [3]Charité, Berlin, Germany

Higher Cognitive Functions

Imagery

414 Perspective Taking Modulates Intersubject Synchronization of Brain Activity during Natural Viewing
Juha Lahnakoski[1,2], Iiro Jääskeläinen[1], Juha Salmi[1], Riitta Hari[3], Mikko Sams[1], Lauri Nummenmaa[1,3,4]
[1]Mind and Brain Laboratory, BECS, Aalto University School of Science, Espoo, Finland, [2]Advanced Magnetic Imaging Centre, Aalto University School of Science, Espoo, Finland, [3]Brain Research Unit, Low Temperature Laboratory, Aalto University School of Science, Espoo, Finland, [4]Turku PET centre, Turku, Finland

415 High Resolution Functional Mapping of Primary Motor and Somatosensory Cortex in Humans at 7 T
Robert Trampel[1], Andreas Schäfer[1], Robin Heidemann[1], Dimo Ivanov[1], Gabriele Lohmann[1], Stefan Geyer[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

416 Individual differences in neuronal correlates of imagined and perceived tunes
Sibylle Herholz[1,2,3], Andrea Halpern[4], Robert Zatorre[1,2,3]
[1]Montreal Neurological Institute, McGill University, Montreal, QC, Canada, [2]International Laboratory for Brain, Music and Sound Research (BRAMS), Montreal, QC, Canada, [3]Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT), Montreal, QC, Canada, [4]Department of Psychology, Bucknell University, Lewisburg, PA

417 Remembering by imagining? Auditory short-term memory and imagery use different neural mechanisms
Annika Linke[1], Rhodri Cusack[2]
[1]MRC Cognition And Brain Sciences Unit, Cambridge, United Kingdom, [2]MRC CBU, Cambridge, United Kingdom

418 Similarity of patterns of neural activity during perception and vivid remembering of short movie cl
Bradley Buchsbaum[1], Herve Abdi[2], Candice Fang[1], Sabrina Lemire-Rodger[1]
[1]Rotman Research Institute, Toronto, Canada, [2]University of Texas, Dallas, Dallas, TX

419 Does motor imagery share neural networks with executed movement: a multivariate fMRI analysis
Nikhil Sharma[1], Simon Jones[2], Jean-Claude Baron[3]
[1]NINDS, Bethesda, United States, [2]Department of Clinical Neurosciences. University of Cambridge, Cambridge, United Kingdom, [3]University of Cambridge Department of Clinical Neurosciences/Neurology Unit, Cambridge, United Kingdom

420 Calibrating consciousness: using graded sedation to test paradigms for the vegetative state
Ram Adapa[1,2], David Menon[2], Adrian Owen[3], Anthony Absalom[4]
[1]Division of Anaesthesia, Cambridge, United Kingdom, [2]University of Cambridge, Cambridge, United Kingdom, [3]Cognition and Brain Sciences Unit, Cambridge, United Kingdom, [4]Univeristy Medical Center, Groningen, Netherlands

421 Inter-subject variability in brain activity during motor imagery
Mathieu Grégoire[1,2], Sébastien Hétu[1,2], Fanny Eugène[2], Pierre-Emmanuel Michon[2], Philip Jackson[1,2]
[1]Université Laval, Québec, Canada, [2]Centre Interdisciplinaire de Recherche en Réadaptation et Intégration Sociale, Québec, Canada

422 The functional role of the primary auditory cortex during spontaneous auditory imagery
Jihoon Oh[1], Jae-Hyung Kwon[2], In-Seong Kim[3], Bo-Sung Yang[4], JAESEUNG JEONG[5]
[1]Catholic Medical College of Korea, Seoul, South Korea, [2]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of, [3]SIEMENS Korea, Seoul, Korea, Republic of, [4]Dae Jeon St. Mary's Hospital, Daejeon, Korea, Republic of, [5]KAIST, Daejeon

423 Decoding Brain Activity during Imagery Mental Tasks: from Brain Mapping to Brain Computer Interface
Jlenia Toppi[1], Laura Astolfi[2], Serenella Salinari[3], Fabio Babiloni[4], Febo Cincotti[5], Donatella Mattia[6]
[1]University of Rome 'Sapienza', [2]Department of Computer Science and Systems, University "Sapienza", Rome, Italy, [3]University of Rome 'Sapienza', Rome, Italy, [4]Department of Physiology and Pharmacology, University " Sapienza", Rome, Italy, [5]IRCCS Fondazione Santa Lucia, Rome, Italy, [6]IRCCS "Fondazione Santa Lucia", Rome, Italy

424 Sustained Attention without Input Stimuli Evokes Activity in the Somatosensory Cortex: An fMRI Study
Clemens Bauer[1], José Díaz[2], Erick Pasaye[1], Pablo Vázquez[1], Luis Concha[1], Fernando Barrios[1]
[1]Instituto de Neurobiología, Universidad Nacional Autónoma de México, Querétaro, México, [2]Facultad de Medicina. Universidad Nacional Autónoma de México, México City, México

425 Dissociation of the neural basis for intensity and emotion in olfactory imagery: an fMRI study
Atsushi Miyagawa[1], Yoko Mano[2], Toshimune Kambara[3], Makoto Miyauchi[4], Motoaki Sugiura[4], Ryuta Kawashima[5]
[1]Tohoku University School of Medicine, Sendai, Japan, [2]Department of Psychology, Northwestern University, Evanston, IL, [3]IDAC, Tohoku University, JSPS, Tokyo, Japan, [4]IDAC, Tohoku University, Sendai, Japan, [5]SAIRC, IDAC, Tohoku University, Sendai, Japan

426 Inhibition of the motor command during motor imagery: a MEG study with a tetraplegic patient
Franck Di Rienzo[1], Aymeric Guillot[2], Claude Delpuech[3], Murielle Grangeon[4], Gilles Rode[5], Christian Collet[6]
[1]University Claude Bernard Lyon 1 EA 647 Mental Processes and Motor Performance, F69622 Villeurbanne Cedex, France, [2]University Claude Bernard Lyon 1 EA 647 Mental Processes and Motor Performance, F-69622 Villeurbanne Cedex, France, [3]INSERM U821 Brain Dynamics and Cognition, F-69675 Bron Cedex, France, [4]University Claude Bernard EA 647 Mental Processes and Motor Performance, F-69622 Villeurbanne Cedex, France, [5]Henri Gabrielle Hospital – Neurological rehabilitation, F69565 Saint Genis Laval, France, [6]EA 647 - Mental Processes and Motor Performance, F-69622 Villeurbanne Cedex, France

427 Effects of perspective and modality content of motor imagery on somatosensory excitability
Julien Voisin[1], Catherine Mercier[1], Philip Jackson[2], Carol Richards[1], Francine Malouin[1]
[1]CIRRIS, Dt réadaptation, U Laval, Québec, Canada, [2]CIRRIS, CRULRG, École de Psychologie, U Laval, Quebec, Canada

428 Motor Area Activity during Mental Rotation of Hand and Object : A NIRS Study
Natsumi Tanaka[1], Sotaro Shimada[2]
[1]Meiji University, Japan, [2]Meiji University, Japan

429 Overview of DTI and Tractography – Established and emerging clinical utilization in pediatric CNS
Muhammad Naeem Khan[1]
[1]IWK health centre, Dalhousie University, Halifax, Nova Scotia

Higher Cognitive Functions

Music

430 ** **Musical practice induces hippocampal plasticity: a VBM study**
Mathilde Groussard[1], Fausto Viader[1], Brigitte Landeau[1], Béatrice Desgranges[1], Francis Eustache[1], Hervé Platel[1]
[1]Inserm-EPHE- Université de Caen Basse Normandie - U923, Caen, France

431* **Artificial Grammar Learning in Music: The Role of White Matter in the Right Hemisphere, (O-M2)**
Psyche Loui[1], Gottfried Schlaug[2]
[1]Harvard Medical School, [2]Harvard Medical School, Boston, MA

432 Music-specific responses within the temporal lobe
Arafat Angulo-Perkins[1], William Aubé[2,3], Isabelle Peretz[2,3], Fernando Barrios[1], Jorge Armony[2,4], Luis Concha[1]
[1]Universidad Nacional Autonoma de Mexico, Queretaro, Mexico, [2]International Laboratory for Brain, Music and Sound Research (BRAMS), Montréal, Canada, [3]Department of Psychology, Université de Montréal, Montréal, Canada, [4]Douglas Institute and Department of Psychiatry, McGill University, Montréal, Canada

433 Instrument dependent plasticity and associated activations in trumpet players compared to pianists
Benjamin Gebel[1], Evangelia Kaza[1], Christoph Braun[2], Martin Lotze[1]
[1]Functional Imaging Unit University of Greifswald, Greifswald, Germany, [2]Institute for Behavioral Psychology, University of Tübingen, Tübingen, Germany

434 Perception and Processing of modern and classical Chamber Music in a String Quartet
Gregor Kasprian[1], Veronika Schöpf[2], Ronald Sladky[3], Ewald Moser[4], Daniela Prayer[1], Christian Windischberger[4]
[1]Department of Radiology, Medical University of Vienna, Vienna, Austria, [2]Department of Radiology and MR Centre of Excellence, Medical University of Vienna, Vienna, Austria, [3]MR Centre Of Excellence, Medical University of Vienna, Vienna, Austria, [4]MR Centre of Excellence and Centre for Medical Physics, Medical University of Vienna, Vienna, Austria

435 Withdrawn

436 A multimodal approach: Grey matter differences in early and late-trained musicians
Jennifer Bailey[1]
[1]Concordia University, Montreal, Canada

437 Gamma oscillatory network across auditory and sensorimotor systems during metronome listening
Takako Fujioka[1], Laurel Trainor[2,1], Edward Large[3], Bernhard Ross[1]
[1]Rotman Research Institute, Baycrest, Toronto, Ontario, Canada, [2]McMaster University, Hamlton, Ontario, Canada, [3]Florida Atlantic University, Boca Raton, FL

438 Withdrawn

439 Electrophysiological marker of musical pitch violations in congenital amusia
Nicolas Robitaille[1], Sean Hutchins[1], Patricia Moreau[1], Isabelle Peretz[1]
[1]International Laboratory for Brain, Music and Sound (BRAMS), Montreal, Canada

440 Brain regions activated by familiar and unfamiliar music: a MEG study
Naznin Virji-Babul[1], Alexander Moiseev[2], Tongxin Feng[2], Kimberley Watt[3], Nadya Moiseeva[1], Minna Huotilainen[4]
[1]University of British Columbia, Vancouver, British Columbia, [2]Down Syndrome Research Foundation, Burnaby, British Columbia, [3]Simon Fraser University, Burnaby, British Columbia, [4]Finnish Center of Excellence in Interdisciplinary Music Research, Helsinki, Finland

441 The Effect of Music on the Resting State Network: The Role of the Reticular Activating System (RAS)
Benjamin Kay[1], Mark DiFrancesco[2], Christi Banks[3], Scott Holland[2], Jerzy Szaflarski[4,2]
[1]University of Cincinnati, Cincinnati, OH, [2]Pediatric Neuroimaging Research Consortium, Cincinnati, OH, [3]University of Cincinnati Academic Health Center, Cincinnati, OH, [4]Center for Imaging Research, Cincinnati, OH

442 Absence of mismatch negativity in temporal envelope perception of cochlear-implant users
Lydia Timm[1], Deepashri Agrawal[1], Reinhard Dengler[1], Matthias Wittfoth[1,2]
[1]Department of Neurology, Hannover Medical School, Hannover, Germany, [2]NICA (NeuroImaging and Clinical Applications), Hannover, Germany

443 Hearing two objects at once: Infants show an object-related ERP response to two simultaneous sounds
Nicole Folland[1], Blake Butler[1], Nicholas Smith[2], Laurel Trainor[3]
[1]McMaster University, Hamilton, Canada, [2]Boys Town National Research Hospital, Omaha, United States, [3]McMaster University, Hamlton, Ontario

Imaging Methods

Anatomical MRI

444* Dependence of T2* relaxation of brain white matter on B0 orientation, (O-M1)
Jongho Lee[1,2], Peter van Gelderen[2], Li-Wei Kuo[2], Hellmut Merkle[2], Afonso Silva[3], Jeff Duyn[2]
[1]Department of Radiology, University of Pennsylvania, Philadelphia, PA, [2]Advanced MRI Section, LFMI, NINDS, National Institutes of Health, Bethesda, MD, [3]CMU, LFMI, NINDS, National Institutes of Health, Bethesda, MD

445 Sex differences in brain structure in opposite sex twin pairs
Anouk den Braber[1], Dennis van 't Ent[1], Dorret Boomsma[1], Danielle Cath[2], de Geus Eco[1]
[1]VU University, Amsterdam, Netherlands, [2]Utrecht University, Utrecht, Netherlands

446 Comparison of registration strategies in multi-center MRI studies of neurodegeneration
Artur Marchewka[1,2], ferath Kherif[1], Melissa Saenz[1], Krueger Gunnar[3], Anna Grabowska[2], Richard Frackowiak[1], Bogdan Draganski[1]
[1]Laboratoire des neurosciences cliniques - LREN, Lausanne, Switzerland, [2]Nencki Institute of Experimental Biology, Warsaw, Poland, [3]Advanced Clinical Imaging Technology, Siemens Medical Solutions–Centre d'Imagerie BioMedicale (CIBM), Lausanne, Switzerland

447 Iron, Ferritin, Myelin, and MR-Contrast: Proton-Induced X-Ray Emission Maps of Cortical Iron Content
Carsten Stueber[1], Markus Morawski[2], Katja Reimann[1], Nirav Barapatre[3], Stefan Geyer[4], Robert Turner[4]
[1]Dept. of Neurophysics, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Paul-Flechsig-Institute of Brain Research, University of Leipzig, Leipzig, Germany, [3]Institute of Nuclear Solid State Physics, University of Leipzig, Leipzig, Germany, [4]Dept. of Neurophysics, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

448 Imaging Electrical Properties of the Human Brain by B1-mapping at 7T
Xiaotong Zhang[1], Pierre-Francois van de Moortele[2], Sebastian Schmitter[2], Bin He[1]
[1]Department of Biomedical Engineering, University of Minnesota, Minneapolis, MN, [2]Center for Magnetic Resonance Research, University of Minnesota, Minneapolis, MN

449 Differences and similarities between morphological and anatomical networks
Lester Melie-García[1], Gretel Sanabria-Diaz[1], Yasser Iturria-Medina[1], Marlis Ontivero-Ortega[1], Pedro Valdes-Sosa[1]
[1]Cuban Neuroscience Center, Havana, Cuba

450 Effects of a common variant in GSK3βon Hippocampal Volume in Healthy Human Volunteers
Beth Verchinski[1], Becky Inkster[2], Catherine Gambale[1], Thomas Nichols[3], Paul Matthews[4], Brad Zoltick[1], Fengyu Zhang[1], Aaron Goldman[1], Venkata Mattay[1], Daniel Weinberger[1], Heike Tost[5]
[1]National Institute of Mental Health, National Institutes of Health, Bethesda, MD, [2]Centre for Neuroscience, Imperial College, London, United Kingdom, [3]University of Warwick, Dept. of Statistics, Coventry, United Kingdom, [4]Imperial College London, London, United Kingdom, [5]Central Institute of Mental Health (CIMH) Mannheim, Germany, Mannheim, Germany

451 Analysis of automated methods to spatial normalisation of lesioned brains
Pablo Ripollés Vidal[1], Josep Marco-Pallarés[2,3], Júlia Miró Lladó[4,3,5], Ruth de Diego-Balaguer[1,5,6], Mercè Falip[4], Montserrat Juncadella[4], Fernando Rubio[4], Antoni Rodríguez-Fornells[1,5,6]
[1]Cognition and Brain Plasticity Group (IDIBELL), Barcelona, Spain, [2]Dept. of Basic Psychology, Campus Bellvitge, University of Barcelona, Barcelona, Spain, [3]Cognition and Brain Plasticity Group [Bellvitge Biomedical Research Institute-] IDIBELL, Barcelona, Spain, [4]Neurology Section, Hospital Universitari de Bellvitge (HUB), Barcelona, Spain, [5]Dept. of Basic Psychology, Campus Bellvitge, University of Barcelona, Barcelona, Spain, [6]Catalan Institution for Research and Advanced Studies, ICREA, Barcelona, Spain

452 Structural cerebral correlates of impulsiveness in healthy subjects
Christina Schilling[1], Simone Kühn[2], Alexander Romanowski[3], Florian Schubert[4], Andreas Heinz[5], Norbert Kathmann[6], Juergen Gallinat[7]
[1]Charité University Medicine, Berlin; Germany, [2]Department of Experimental Psychology and Ghent Institute for Functional and Metabolic Imaging, Gent, Belgium, [3]Charite Berlin, Berlin; Germany, [4]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [5]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany, [6]Department of Psychology, Humboldt-Universität zu Berlin, Berlin, Germany, [7]Charite Universitaetsmedizin Berlin, Berlin, Germany

453 Training-Induced Neural Plasticity in Golf Novices
Ladina Bezzola[1], Susan Mérillat -(Koeneke)[2], Lutz Jancke[1]
[1]University of Zurich, Department Neuropsychology, Zurich, Switzerland, [2]University of Zurich, The International Normal Aging and Plasticity Imaging Center INAPIC, Zurich, Switzerland

454 Structural and Functional Treatment Effects of Cognitive Behavioral Therapy in Chronic Pain
Magdalena Naylor[1], Michael Krauthamer[1], David Seminowicz[2], Julie Dumas[1], John Mantegna[1], Hayley Perelman[1], Elizabeth McCallion[1], Christopher Filippi[1], Paul Newhouse[1]
[1]University of Vermont, Burlington, VT, USA, [2]University of Maryland Baltimore, Baltimore, MD, USA

455 Brain Size Estimates: Methods Matter
Anderson Winkler[1,2], Margaret Brumbaugh[2], Peter Kochunov[3], Lauren Lombardo[2], John Blangero[4], Ravindranath Duggirala[5], Peter Fox[6], David Glahn[7]
[1]Yale University, New Haven, CT, [2]The Institute of Living, Hartford, CT, [3]2Research Imaging Institute, University of Texas Health Science Center, San Antonio, TX, [4]Southwest Foundation for biomedical research, san antonio, TX, [5]Department of Genetics, Southwest Foundation for Biomedical Research, San Antonio, TX, [6]Research Imaging Center, UT Health Science Center, San Antonio, TX, [7]Yale University, Hartford, CT

456 Robust fusion of Jacobian maps for Deformation-Based Morphometry
Nicolas Guizard[1], Pierrick Coupé[1], Vladmir Fonov[1], Douglas Arnold[1], D. Louis Collins[1]
[1]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Canada

457 MRI T2* relaxation and Frequency Contrast Changes in Cuprizone-Fed Mice
Jongho Lee[1], Bing Yao[2], Sara Palumbo[3], Karin Shmueli[2], Peter van Gelderen[2], Masaki Fukunaga[4], Francesca Bosetti[3], Afonso Silva[5], Jeff Duyn[2]
[1]Department of Radiology, University of Pennsylvania, Philadelphia, PA, [2]Advanced MRI Section, LFMI, NINDS, National Institutes of Health, Bethesda, MD, [3]Brain Physiology and Metabolism Section, NIA, National Institutes of Health, Bethesda, MD, [4]Biofunctional Imaging, WPI Immunology Frontier Research Center, Osaka University, Osaka, Japan, [5]CMU, Laboratory of Functional and Molecular Imaging, National Institutes of Health, Bethesda, MD

458 High resolution MRI of fixated human brain enhanced by magnetization transfer (MT) and T2* weighting
Gunther Helms[1], Walter Schulz-Schaeffer[2], Arne Wrede[2], Peter Dechent[3]
[1]MR-Research in Neurology and Psychiatry, Goettingen University Medical Center, Goettingen, Germany, [2]Dept. of Neuropathology, Goettingen University Medical Center, Goettingen, Germany, [3]MR-Research in Neurology and Psychiatry, University Medical Center Goettingen, Goettingen, Germany

459 Dexterity in pegboard test correlates with right lobule VI volume in right-handed 14-year-olds
Alexander Romanowski[1], Simone Kühn[2], Christina Schilling[1], Andreas Heinz[1], Juergen Gallinat[1]
[1]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany, [2]Department of Experimental Psychology and Ghent Institute for Functional and Metabolic Imaging, Gent, Belgium

460 Characteristics of Brain Anatomy on Projection Maps of Cortical Surface
Xiaojian Kang[1,2], Timothy Herron[3], David Woods[3,4,5]
[1]Department of Neurology and Center for Neuroscience, University of California at Davis, Martinez, CA, [2]Human Cognitive Neurophysiology Lab, VA Research Service, Martinez, CA, [3]Human Cognitive Neurophysiology Lab, VA Research Service, VA-NCHCS, Martinez, CA, [4]Department of Neurology and Center for Neuroscience, University of California at Davis, Sacromento, CA, [5]UC Davis Center for Mind and Brain, Davis, CA

461 Modeling Local Distortion in Shape for Brain MR Images
Wei-Chen Cheng[1], Philip E. Cheng[1], Michelle Liou[1]
[1]Institute of Statistical Science, Academia Sinica, Taipei, Taiwan, Republic of China

462 Hippocampal Gray Matter Volume Increase during Luteal Phase of Menstrual Cycle as Measured with VBM
Gabriela Alarcon[1], Jonathan Kippenhan[1], Erica Baller[1], Shau-Ming Wei[1], Peter Schmidt[1], Karen Berman[1]
[1]National Institutes of Health, Bethesda, MD

463 CANDIShare: A Resource for Pediatric Neuroimaging Data
Christian Haselgrove[1], Steven Hodge[1], Jean Frazier[1], David Kennedy[2]
[1]University of Massachusetts Medical School, Worcester, United States, [2]University of Massachusetts Medical Center, Worcester, United States

464 Intrauterine tobacco exposure and brain morphology: an MRI study in young children
Hanan El Marroun[1], Henning Tiemeier[1], Frank Verhulst[1], Tonya White[1]
[1]Erasmus Medical Centre, Rotterdam, Netherlands

465 Comparative Analysis of Volumetric Corpus Callosum Measurement Methods Conducted on Single Subject
Benjamin Wade[1], Mary Gilliam[2], Francois Lalonde[2], Michael Stockman[2], Liv Clasen[3], Rhoshel Lenroot[4], Jay Giedd[5]
[1]National Institutes of Mental Health, [2]National Institutes of Mental Health, Bethesda, MD, [3]NIMH Child Pyschiatry Branch, Bethesda, MD, [4]Randwick, NSW, Australia, [5]NIMH, Bethesda, DC

466 Chronic changes in MRI brain volume in MS patients: A Voxel-Guided Morphometry Study
Matthias Kraemer[1], Jochen Hirsch[4], Andreas Dabringhaus[2], Thorsten Schormann[3], Achim Gass[4]
[1]Neurological Therapy Center, Cologne, Germany, [2]St. Mauritius Therapy Clinic, Meerbusch, Germany, [3]Institute for Anatomy, Duesseldorf, Germany, [4]Department of Neurology, University Hospital, Mannheim, Germany

467 MRI study in violent offenders
ANA CALZADA[1], Alfredo Alvarez[2], Lidice Galan[2], Lester Melie[2], Mitchell Valdes[2]
[1]LEGAL MEDICINE INSTITUTE. CLINICAL NEUROPHYSIOLOGY DEPARTMENT, Havana, Cuba, [2]Cuban Neuroscience Center, Havana, Cuba

468 Effects of the Schizophrenia Susceptibility Gene G72 on frontal and temporal grey matter volumes
Sarah Trost[1], Birgit Platz[2], Peter Falkai[1], Thomas Wobrock[1], Harald Scherk[2], David Zilles[1], Andrea Schmitt[2], Wolfgang Reith[3], Jobst Meyer[4], Oliver Gruber[2]
[1]Center for Translational Research in Systems Neuroscience and Psychiatry, Goettingen, Germany, [2]Centre for Translational Research in Systems Neuroscience and Psychiatry, Goettingen, Germany, [3]Department of Neuroradiology, Saarland University, Homburg, Germany, [4]Department of Neurobehavioral Genetics, University of Trier, Trier, Germany

469 MRI signal intensity of the globus pallidus in children exposed to manganese from drinking water
Laurie-anne Dion[1], Maryse Bouchard[2], Gilles Beaudoin[3], Philippe Major[2], Marie-Eve Brodeur[4], Alan Tucholka[5], Guillaume Gilbert[6], Donna Mergler[7], Dave Saint-Amour[8]
[1]University of Quebec in Montreal, CHU Ste-Justine, Montreal, Quebec, [2]University of Montreal, CHU Ste-Justine, Montreal, Quebec, [3]CHUM Notre-Dame, University of Montreal, Montreal, Quebec, [4]University of Quebec in montreal, Motreal, Quebec, [5]University of Montreal, Department of Psychology, CHU Ste-Justine, Montreal, Quebec, [6]CHUM Notre-Dame, Montreal, Quebec, [7]University of Quebec in Montreal, Montreal, Quebec, [8]University of Quebec in Montreal, CHU ste-Justine, Montreal, Quebec

470 Ex-vivo MRI Investigation of the Human Locus Coeruleus
Noam Keren[1], Paul Morgan[2], Nicholas Gregory[1], Ann-Charlotte Granholm[1], Vanessa Hinson[1], Gary Aston-Jones[1], Mark Eckert[1]
[1]Medical University of South Carolina, Charleston, SC, USA, [2]University of Nottingham, Nottingham, United Kingdom

471 Structural Brain Differences in Alexithymia: a Voxel-Based Morphometry Study
Katharina Goerlich[1,2], Lori Bruce[2], Andre Aleman[1], Christine Hooker[2]
[1]Neuroimaging Center, University of Groningen, Groningen, Netherlands, [2]Department of Psychology, Harvard University, Cambridge, MA

Imaging Methods

BOLD fMRI

472* Advances in High-Resolution Functional Imaging of Hippocampal Subregions at 7 Tesla, (O-T2)
Nanthia Suthana[1], Markus Donix[2], Dave Wozny[3], Robin Heidemann[4], Robert Trampel[4], Adam Bazih[5], Michael Jones[5], Robert Turner[4], Susan Bookheimer[6]
[1]University of California, Los Angeles, Los Angeles, United States, [2]Department of Psychiatry and Psychotherapy, Universitätsklinikum Carl Gustav Carus, Dresden, Germany, [3]Department of Otolaryngology, Oregon Health Science University, Portland, OR, [4]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [5]University of CA, Los Angeles, Los Angeles, CA, [6]UCLA Center for Cognitive Neurosciences, Los Angeles, United States

473* **Identifying direction selective computations in human area MT using ultra high field fMRI, (O-Th3)**
Jan Zimmermann[1], Rainer Goebel[1], Federico De Martino[1], Pierre-Francois van de Moortele[2], David Feinberg[3], Gregor Adriany[2], Kamil Ugurbil[2], Essa Yacoub[4]
[1]Maastricht University, Maastricht, Netherlands, [2]University of Minnesota, Minneapolis, MN, [3]Advanced Technologies, UC Berkley, Berkley, CA, [4]University of Minnesota, Minneapolis, United States

474** **Fine segregation of the visual system during resting-state**
Salma Mesmoudi[1], Vincent Perlbarg[2], Mélanie Pélégrini-Issac[2], Roberto Toro[3], Yves Burnod[4], Habib Benali[1]
[1]INSERM/UPMC, Paris, France, [2]INSERM / UPMC Univ. Paris 06, UMR_S678, LIF, Paris, France, [3]Pasteur, Paris, France, [4]Institut des Systèmes Complexe Paris-île-de-France, Paris, France

475* **Ultra-fast functional imaging of human visuomotor cortex using echo-shifted MR inverse imaging, (O-M1)**
Wei-Tang Chang[1], Thomas Witzel[2], Kevin Wen-Kai Tsai[1], Wen-Jui Kuo[3], Fa-Hsuan Lin[1,2]
[1]Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan, Republic of China, [2]Martinos Center, Charlestown, MA, United States, [3]Institute of Neuroscience, National Yang Ming University, Taipei, Taiwan, Republic of China

476** **Multi-echo EPI with parallel transmission z-shimming for increased sensitivity in BOLD fMRI**
Benedikt Poser[1], Cungeng Yang[1], Weiran Deng[1], Vijayanand Alagappan[2], Lawrence Wald[2], Andrew Stenger[3]
[1]University of Hawaii, Honolulu, HI, [2]Massachusetts General Hospital, Boston, MA, [3]University of Hawaii, Honolul, HI

477* **Microvascular Temporal Dynamics Using the Spin Echo Hemodynamic Impulse Response at 7 T, (O-M1)**
Jeroen Siero[1,2,3], Nick Ramsey[1,2], Johannes Hoogduin[1,3], Peter Luijten[2,3], Natalia Petridou[1,2,3]
[1]Rudolf Magnus Institute, Utrecht, Netherlands, [2]University Medical Center Utrecht, Utrecht, Netherlands, [3]Radiology, Utrecht, Netherlands

478** **Breathing gas calibration for MR CMRO2 mapping: comparative effects on functional brain networks**
Dimo Ivanov[1], Gabriele Lohmann[1], Stefan Kabisch[2,1], Ilona Henseler[1], Haiko Schloegl[2,1], Wolfgang Heinke[3], Chloe Hutton[4], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Department of Medicine, University of Leipzig, Leipzig, Germany, [3]Department of Anestesiology and Intensive Care Therapy, University Hospital Leipzig, Leipzig, Germany, [4]Wellcome Trust Centre for Neuroimaging, Institute of Neurology, University College London, London, United Kingdom

479 Improves BOLD fMRI sensitivity using dynamic magnetic resonance multi-echo inverse imaging
Kevin Tsai[1], Thomas Witzel[2], Wen-Jui Kuo[3], Fa-Hsuan Lin[1,2]
[1]National Taiwan University, Taipei, Taiwan, [2]Martinos Center, Charlestown, MA, [3]National Yang-Ming University, Taipei, Taiwan

480** **Event-Related Real-Time fMRI at 3 Tesla using Echo-Volumar-Imaging**
Stefan Posse[1], Elena Ackley[1], Radu Mutihac[2], Matthew Shane[3], Jochen Rick[4], Maxim Zaitsev[5], Oliver Speck[6]
[1]University of New Mexico School of Medicine, Dept. of Neurology, Albuquerque, NM, United States, [2]1 University of New Mexico, Albuquerque, NM, [3]The Mind Research Network, United States, [4]Dept. Of Radiology, Medical Physics University Hospital Freiburg, Freiburg, Germany, [5]Dept. of Radiology - Medical Physics, University Medical Center Freiburg, Freiburg, Germany, [6]Biomedical Magnetic Resonance, OvG University, Magdeburg, Germany

481 There's more in time series than the canonical response: K-means clustering of fMRI with high TNSR
Javier Gonzalez-Castillo[1], Ziad S. Saad[2], Peter Bandettini[1]
[1]Section on Functional Imaging Methods, National Institute of Mental Health, NIH, Bethesda, MD, United States, [2]Scientific and Statistical Computing Core, National Institute of Mental Health, NIH, Bethesda, MD

482 Sparse Dictionary Learning for fMRI Activation Detection Using SPM and MDL Criterion
Kangjoo Lee[1], Sungho Tak[1], Jong Chul Ye[1]
[1]Dept. of Bio and Brain Engineering, KAIST, Daejeon, Korea, Republic of

483 Effect of SLC6A4 and CACNA1C Genes on Age-related Changes in Medial Temporal Lobe Function
John Muse[1], Michael White[1], Saumitra Das[1], Kristin Bigos[1], Joseph Callicott[1], Daniel Weinberger[1], Venkata Mattay[1]
[1]NIMH, NIH, Bethesda, United States

484 Ignore Ernst when choosing the flip angle for fMRI
Javier Gonzalez-Castillo[1], Jerzy Bodurka[2], Vinai Roopchansingh[3], Peter Bandettini[1,3]
[1]National Institute Mental Health, NIH, Bethesda, MD, United States, [2]Laureate Institute for Brain Research, Tulsa, OK, [3]Functional MRI Core, National Institute of Mental Health, NIH, Bethesda, MD, United States

485 Matched Filter EPI Acquisition for fMRI Group Studies
Lars Kasper[1,2], Max Häberlin[2], Christoph Barmet[2], Bertram Wilm[2], Christian Ruff[1], Klaas Enno Stephan[1,3], Klaas Pruessmann[2]
[1]Laboratory for Social and Neural Systems Research, Department of Economics, University of Zurich, Zurich, Switzerland, [2]Institute for Biomedical Engineering, University and ETH Zurich, Zurich, Switzerland, [3]Wellcome Trust Centre for NeuroImaging, London, United Kingdom

486 Stimulus duration can change polarity of BOLD response in the amygdalae: a 7T fMRI study
Wietske van der Zwaag[1], Sandra Da Costa[2], Nicole Zurcher[2], Reginald Adams[3], Nouchine Hadjikhani[2]
[1]University of Lausanne, Lausanne, Switzerland, [2]Brain and Mind Institute, EPFL, Lausanne, Switzerland, [3]Department of Psychology, Pennsylvania State University, University Park, PA

487 Validation of block design fMRI using continuous speech to map the speech motor network
Casey Strickland[1], Wei Zhang[1], Crystal Franklin[1], Peter Fox[1], Shalini Narayana[1]
[1]Research Imaging Institute, University of Texas Health Science Center at San Antonio, San Antonio, TX, United States

488 Hemodynamic response variability measured by high temporal resolution fMRI
Pierre LeVan[1], Benjamin Zahneisen[1], Thimo Hugger[1], Jürgen Hennig[1]
[1]University Medical Center Freiburg, Freiburg, Germany

489 Complexity of Resting State BOLD fMRI Signal Characterized by Approximate Entropy
Collin Liu[1,2], Anitha Krishna[1], Lirong Yan[1], Jeffry Alger[1,2], Danny Wang[1,2]
[1]UCLA Brain Mapping Center, Los Angeles, CA, [2]Department of Neurology, University of California Los Angeles, Los Angeles, CA

490 Statistical Parametric Mapping for T2* Dependence Does Not Show Artifactual Correlation
Prantik Kundu[1], Souheil Inati[1], Jennifer Evans[1], Wen-Ming Luh[1], Peter Bandettini[1]
[1]NIMH, Bethesda, MD

491 Change of Spontaneous Brain Activity Reflects Episodic Memory Consolidation in APOE Healthy Carriers
Deyi Wang[1], Xiujie Han[1], Sufang Li[1], Dongqiang Liu[2], Chaogan Yan[1], Yong He[1], Chaozhe Zhu[1], Vesa Kiviniemi[3], Yufeng Zang[1,2]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, [2]Center for Human Brain Research and Affiliated Hospital, Hangzhou Normal University, Hangzhou, China, [3]Department of Diagnsotic Radiology, Oulu University Hospital, Oulu, Finland

492 Midbrain Dopamine Modulates Mesocorticolimbic and Sensorimotor Regulation of Decision-Making
Brett Cropp[1], Mbemba Jabbi[1], Philip Kohn[1], Tiffany Nash[1], Jonathan Kippenhan[1], Hannah Raila[1], Daniel Eisenberg[1], Joseph Masdeu[1], Karen Berman[1]
[1]National Institutes of Health, Bethesda, MD

493 Illustration of Functional Connectivity Alterations in Cocaine Users using a Time-Frequency Analysis
Changwei Wu[1], Hong Gu[1], Elliot Stein[1], Yihong Yang[1]
[1]Neuroimaging Research Branch, National Institute on Drug Abuse, Baltimore, MD

494 Direct neurofeedback to the visual system using real-time fMRI
Nikolaus Weiskopf[1], Ithabi Gantner[2,1], Frank Scharnowski[1,3], Amanda Kaas[2], Chloe Hutton[4]
[1]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom, [2]Maastricht University, Maastricht, Netherlands, [3]Institute of Cognitive Neuroscience, London, United Kingdom, [4]Wellcome Trust Centre for Neuroimaging, Institute of Neurology, University College London, London, United Kingdom

495 High Resolution Functional Connectivity of Spontaneous Activity Networks at 7T
Christina Triantafyllou[1,2], Boris Keil[2], Lawrence Wald[2,3]
[1]A.A. Martinos Imaging Center, McGovern Institute for Brain Research, MIT, Cambridge, MA, United States, [2]A.A. Martinos Center for Biomedical Imaging, Department of Radiology, MGH, Harvard Medical School, Charlestown, MA, United States, [3]Harvard-MIT Division of Health Sciences and Technology, Cambridge, MA, United States

496 Head-repositioning does not reduce the reproducibility of block-design motor fMRI activation
David Soltysik[1], David Thomasson[2], Sunder Rajan[1], Javier Gonzalez-Castillo[3], Paul DiCamillo[2], Nadia Biassou[2]
[1]U.S. Food & Drug Administration, Silver Spring, MD, [2]National Institutes of Health, Bethesda, MD, [3]SFIM/LBC/NIMH/NIH, Bethesda, MD

497 The influence of heart rate variation on task and group effects of the fMRI BOLD signal
Dennis van 't Ent[1], Edwin Rotgans[2], Jan De Munck[3], Anouk den Braber[4], Dorret Boomsma[5], de Geus Eco[5]
[1]VU university, Amsterdam, Netherlands, [2]VU medical centre, Amsterdam, Netherlands, [3]Amsterdam, Netherlands, [4]VU University Amsterdam, [5]VU University, Amsterdam, Noord-Holland

498 A New Method for Robust Functional to Structural Alignment Using Multi-echo GRE B0 and R2* Mapping
Souheil Inati[1], Pablo Velasco[2], Edward Vessel[2]
[1]National Institute of Mental Health, Bethesda, MD, [2]New York University, New York, NY

499 Multiplexed-EPI with Hadamard Encoding
Liyong Chen[1], Edward Auerbach[2], Jungian Xu[2], Steen Moeller[2], Essa Yacoub[3], Stephen Smith[4], Kamil Ugurbil[3], David Feinberg[5]
[1]Advanced MRI Technologies, Sebastopol, CA, [2]CMRR, University of Minnesota, Minneapolis, MN, [3]University of Minnesota, Minneapolis, MN, [4]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [5]Advanced MRI Technolgies, UC Berkeley, Berkeley, CA

500 Language Probes for Clinical fMRI: Normative Data & Comparison of Activation Profiles of Four Tasks
Brenna McDonald[1], John West[1], Kimberly Campbell[1], Yang Wang[1], Andrew Kalnin[2], Kristine Mosier[1], Jacob Kean[1], Darren O'Neill[1], Andrew Saykin[1]
[1]Indiana University School of Medicine, Indianapolis, United States, [2]The Ohio State University College of Medicine, Columbus, United States

501 Real-time Motion Correction by Optical Tracking for Reducing Spin-History Artifacts in fMRI
David Rotenberg[1,2], Mark Chiew[1,2], Shawn Ranieri[1], Fred Tam[1,3], Simon Graham[2,3,4,1]
[1]Rotman Research Institute, Baycrest, Toronto, Canada, [2]Department of Medical Biophysics, University of Toronto, Toronto, Canada, [3]Imaging Research, Sunnybrook Health Sciences Centre, Toronto, Canada, [4]Heart and Stroke Foundation of Ontario Centre for Stroke Recovery, Toronto, Canada

502 Spatial differences of BOLD post-stimulus undershoot in a Stroop task: implications for hrf
Benedikt Poser[1,2,3], David Norris[2,3]
[1]University of Hawaii, Honolulu, HI, [2]Radboud University Nijmegen, Donders Institute For Brain, Cognition And Behaviour, Nijmegen, Netherlands, [3]Erwin L Hahn Institute for Magnetic Resonance Imaging, University Duisburg-Essen, Essen, Germany

503 Precise Control of Hyper-oxic and -capnic BOLD Calibration for Improved Oxygen Consumption Estimates
Clarisse Mark[1], Bruce Pike[1]
[1]McConnell Brain Imaging Center, Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada

504 Intracranial EEG-fMRI studies at 3.0T in humans with epilepsy
Craig Beers[1,2,3], Dan Pittman[1,2], Cameron Cunningham[1,2,3], Bradley Goodyear[1,2,4], Paolo Federico[1,2,5]
[1]Hotchkiss Brain Institute, Calgary, Canada, [2]Seaman Family MR Research Centre, Calgary, Canada, [3]University of Calgary, Calgary, Canada, [4]Radiology & Clinical Neuroscience, University of Calgary, Calgary, Canada, [5]Clinical Neurosciences, University of Calgary, Calgary, Canada

505 Using a Combination of a Mixture Model and Topological FDR in the Context of Presurgical Planning
Krzysztof Gorgolewski[1], Amos Storkey[1], Mark Bastin[1], Cyril Pernet[1]
[1]University of Edinburgh, Edinburgh, United Kingdom

506 Effect of single nucleotide polymorphism CACNA1C rs1006737 on the neural correlates of working memory in healthy individuals
Johannes Bedenbender[1], Frieder Paulus[2], Sören Krach[3], Axel Krug[4], N Shah[5], Marcella Rietschel[6], Kircher Tilo[7], Andreas Jansen[8]
[1]Philipps-University, Marburg, Germany, [2]Department of Psychiatry, Philipps University Marburg, Germany, Marburg, Germany, [3]Department of Psychiatry, Section of BrainImaging, University of Marburg, Marburg, Germany, [4]Department of Psychiatry and Psychotherapy, Philipps-University Marburg, Marburg, Germany, [5]Forschungszentrum Jülich, Jülich, Germany, [6]Central Institute of Mental Health, Mannheim, Germany, [7]Philipps-University Marburg, Marburg, Germany, [8]Department of Psychiatry and Psychotherapy, Section of BrainImaging, University of Marburg, Marburg, Germany

507 Altered Resting-state Networks in Developmental Stuttering Shown by Dual-regression ICA
Lorena Jimenez-Castro[1,2,3], Peter Kochunov[2,4], Rene Olvera[5], Laura Almasy[6], Ravindranath Duggirala[6], John Blangero[6], David Glahn[7,8], Peter Fox[2,4]
[1]Department of Cellular and Structural Biology, University of Texas Health Science Center, San Antonio, TX, [2]Research Imaging Institute, University of Texas Health Science Center, San Antonio, TX, [3]South Texas Psychiatric Genetics Research Center, Paul L. Foster School of Medicine, Texas Tech University Health Science Center, San Antonio, TX, [4]Department of Radiology, University of Texas Health Science Center, San Antonio, TX, [5]Department of Psychiatry, University of Texas Health Science Center, San Antonio, TX, [6]Department of Genetics, Southwest Foundation for Biomedical Research, San Antonio, TX, [7]Department of Psychiatry, Yale University, Hartford, CT, [8]Olin Neuropsychiatry Research Center, Institute of Living, Hartford Hospital, Hartford, CT

508 Hemodynamic changes can be detected in rat white matter: evidence from a hypercapnic challenge
Erin Mazerolle[1,2], Chris Bowen[2], Drew DeBay[2], Kirk Feindel[2], James Rioux[3], Douglas Rasmusson[4], Kazue Semba[5], Ryan D'Arcy[2]
[1]Neuroscience Graduate Program, Dalhousie University, Halifax, Nova Scotia, Canada, [2]Institute for Biodiagnostics (Atlantic), National Research Council, Halifax, Nova Scotia, Canada, [3]Physics Graduate Program, Dalhousie University, Halifax, Nova Scotia, Canada, [4]Department of Physiology and Biophysics, Dalhousie University, Halifax, Nova Scotia, Canada, [5]Department of Anatomy and Neurobiology, Dalhousie University, Halifax, Nova Scotia, Canada

509 GRASE functional MRI with high temporal resolution and reduced susceptibility artifacts
Lirong Yan[1], Robert Spunt[2], Emily Kilroy[1], Matthias Gunther[3], Matthew Lieberman[2], Danny Wang[1]
[1]Department of Neurology, University of California Los Angeles, Los Angeles, CA, [2]Department of Psychology, University of California Los Angeles, Los Angeles, CA, [3]Institute for Medical Image Computing, University of Bremen, Bremen, Germany

510 Selectivity for detection of self and object motion during natural vision in the human dorsal stream
Rosa Sepe[1], Sabrina Pitzalis[2], Giorgia Committeri[1], Francesco de Pasquale[1], Patrizia Fattori[3], Claudio Galletti[3], Gaspare Galati[4]
[1]Department of Clinical Sciences and Bioimaging, and ITAB, University Gabriele d'Annunzio, Chieti, Italy, [2]Department of Education in Sport and Human Movement, University of Rome 'Foro Italico', Rome, Italy, [3]Department of Human and General Physiology, University of Bologna, Bologna, Italy, [4]Department of Psychology, Sapienza University, and Laboratory of Neuropsychology, Santa Lucia, Rome, Italy

511 Tailored RF-Pulses for Improved fMRI in the Ventral Brain
Christian Windischberger[1], Ewald Moser[2], Nikolaus Weiskopf[3]
[1]MR Center, Medical University of Vienna, Vienna, Austria, [2]Medical Universsity of Vienna, Vienna, Austria, [3]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom

512 Utility of T2-weighted Anatomical Images for fMRI Physiological Noise Visualization
Raquel Phillips[1], Vadim Zotev[1], Jonathon Savitz[1], Ruben Alvarez[1], W. Kyle Simmons[1], Patrick Bellgowan[1], Wayne Drevets[1], Jerzy Bodurka[1]
[1]Laureate Institute for Brain Research, Tulsa, OK, USA

513 Sequence Optimization for Brainstem BOLD fMRI
Marco Piccirelli[1,2], Marco Moro[2,1], Saskia Klein[1], Lars Kasper[1,2], Klaas Enno Stephan[1,3]
[1]Laboratory for Social and Neuronal Systems Research, Department of Economics, University of Zurich, Switzerland, [2]Institute for Biomedical Engineering, University and ETH Zurich, Switzerland, [3]Wellcome Trust Centre for Neuroimaging, University College London, UK

514 Modulation of attention network activation under paroxetine and bupropion in healthy subjects
Heiko Graf[1], Birgit Abler[1], Antonie Hartmann[1], Angela Seeringer[2], Coraline Metzger[3], Julia Kirchheiner[2], Martin Walter[3]
[1]Department of Psychiatry, University of Ulm, Ulm, Germany, [2]Institute of Pharmacology of Natural Products & Clinical Pharmacology, University of Ulm, Ulm, Germany, [3]Department of Psychiatry, Otto-von-Guericke University, Magdeburg, Germany

515 Removal of Synchronized Cardiorespiratory Activity from BOLD fMRI Functional Connectivity Data
Vadim Zotev[1], Raquel Phillips[1], Jerzy Bodurka[1]
[1]Laureate Institute for Brain Research, Tulsa, OK, United States

516 Why the motor accelerates the car: neural correlates of semantic associations in speech production
Juliane Muehlhaus[1], Stefan Heim[1,2], Olga Sachs[3], Ute Habel[1], Katharina Sass[1]
[1]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [2]Institute for Neurosciences and Medicine (INM-1), Research Centre Jülich, Jülich, Germany, [3]Fraunhofer Center for Sustainable Energy Systems CSE, Cambridge, MA, United States

517 Exploring the Dynamic Effect of Acupuncture at ST36 by Analysing ReHo Values of Resting State fMRI
Xiaoling Peng[1], Jun Chen[2,3], Yuanyuan Fan[1], Xian Liu[2,3], Ping Huang[1], Shumei Li[1], Bin Wang[1], Peng Wang[4], Yong He[5], Ruiwang Huang[1], Bo Liu[2,3]
[1]Center for Studies of Psychological Application, Guangdong Key Laboratory of Mental Health and Cognitive Science, South China Normal University, Guangzhou 510631, China, [2]Department of Radiology, Guangdong Province Hospital of Traditional Chinese Medicine, Guangzhou 510120, China, [3]Department of Radiology, Guangzhou University of Traditional Chinese Medicine, Guangzhou 510120, China, [4]School of Computer Science, South China Normal University, Guangzhou 510631, China, [5]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, China

518 Influences of Different Resting State Conditions and Sampling Rates on Brain Functional Network
Pengfei Xu[1], Ruiwang Huang[1,2], Jinhui Wang[1], Teng Xie[1], Zhangye Dong[1], Yuejia Luo[1], Yong He[1]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, P. R. China, [2]Center for Studies of Psychological Application, South China Normal University, Guangzhou 510631, P. R. China

519 White matter fMRI: linking advances in research with neuropsychological measures
Jodie Gawryluk[1], Erin Mazerolle[1], Steven Beyea[1], Ryan D'Arcy[1]
[1]Institute for Biodiagnostics, National Research Council of Canada, Halifax, Canada

520 Changes in Intrinsic Connectivity with Age
Fuyuze Tokoglu[1], Michelle Hampson[1], Todd R. Constable[1]
[1]Yale University, MRRC, New Haven, CT

521 Event-Related Complex-Mental fMRI Studies using Accelerated Multi-Shot 3D EPI
Onur Afacan[1], Dana Brooks[1], W.Scott Hoge[2], Firdaus Janoos[3], Istvan Morocz[4]
[1]Northeastern University, Boston, United States, [2]Harvard Medical School Brigham & Women's Hospital, Boston, MA, [3]Ohio State University, Columbus, OH, [4]Harvard Medical School, Brigham & Women's Hospital, Boston, MA

522 Developmental changes of neuronal networks associated with social cooperation
Elisabeth Steinmann[1], Alexander Prehn-Kristensen[2], Antonia Schmalohr[1], Michael Siniatchkin[3], Ulrich Stephani[4], Stephan Wolff[5]
[1]Neuropediatric Department, Christian-Albrechts-University, Kiel, Germany, [2]Center for Integrative Psychiatry, Department of Child and Adolescent Psychiatry and Psychotherapy, Kiel, Germany, [3]University Hospital, Kiel, Germany, [4]Clinic for Neuropaediatrics, UK-SH Kiel, Kiel, Germany, [5]Department of Neuroradiology, Christian-Albrechts-University, Kiel, Germany

523 Time-resolved analysis of a block-design task
Martin Pyka[1], Axel Krug[1], Andreas Jansen[1], Kircher Tilo[1]
[1]Department of Psychiatry and Psychotherapy, Philipps-University Marburg, Marburg, Germany

524 Whole brain BOLD fMRI within 54 ms using phase-constraint Inverse Imaging (PC-InI)
Rasim Boyacioglu[1], Markus Barth[1]
[1]Radboud University Nijmegen, Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands

525 High resolution and low resolution language localization fMRI at 3 & 7 Tesla
Alexander Geissler[1,2], Simon Robinson[3,2], Moritz Wurnig[1,2], Markus Hilbert[1,2], Katharina Merksa[1,2], Jakob Rath[1,2], Ilse Höllinger[1,2], Nikolaus Klinger[1,2], Siegfried Trattnig[3,2], Roland Beisteiner[1,2]
[1]Study Group Clinical fMRI, Department of Neurology, Medical University of Vienna, Vienna, Austria, [2]MR Center of Excellence, Medical University of Vienna, Vienna, Austria, [3]Department of Radiology, Medical University of Vienna, Vienna, Austria

526 Neural Basis of Changing Face Preference Decision by Gaze Manipulation
Takehito Ito[1], Toshiyuki Marutani[2], Manami Yamamoto[1], Hidenori Suzuki[3], Shinsuke Shimojo[4], Tetsuya Matsuda[1]
[1]Brain Science Institute, Tamagawa University, Tokyo, Japan, [2]Graduate School of Tokyo Medical &Dental University, Tokyo, Japan, [3]Department of Pharmacology, Nippon Medical School, Tokyo, Japan, [4]Division of Biology/ Computation and Neural Systems, California Institute of Technology, Pasadena, CA

527 BOLD frequency shifts in human fMRI at 7T
Marta Bianciardi[1], Peter van Gelderen[1], Jeff Duyn[1]
[1]Advanced MRI Section, LFMI, NINDS, National Institutes of Health, Bethesda, MD, United States

528 Redefining extent thresholds for conjunction analysis
Robert Ellis[1], Gottfried Schlaug[1]
[1]Beth Israel Deaconess Medical Center / Harvard Medical School, Boston, MA, USA

529 Different fMRI activations if a response box or a 3D movement tracking system is used
José Maria Fernandes[1], João Paulo Silva Cunha[1], Sérgio Tafula[2]
[1]IEETA / DETI, University of Aveiro, Aveiro, Portugal, [2]University of Aveiro / ANIFC, Aveiro, Portugal

530 Effects of Single Dose Oral Citalopram on Neuronal Responses: A Task-related phMRI Study
Anne Klomp[1], Michiel de Ruiter[2,1], Aart Nederveen[1], Damiaan Denys[1,3], Liesbeth Reneman[1]
[1]Academic Medical Centre, Amsterdam, Netherlands, [2]Netherlands Cancer Institute, Amsterdam, Netherlands, [3]Netherlands Institute for Neuroscience, Royal Netherlands Academy of Arts and Sciences, Amsterdam, Netherlands

531 Externally cued saccades generation mapped by fMRI with integrated Eye Tracking
Katerina Lukasova[1], Mariana Nucci da Silva[1], Joao Sato[2], Edson Amaro[3]
[1]NIF, University of Sao Paulo, Sao Paulo, Brazil, [2]Universidade Federal do ABC, Sao Paulo, Brazil, [3]NIF, University of Sao Paulo, Sao Paulo, SP, Brazil

532 Development of a Tactile Stimulator to Enable Cortical Mapping of Walking-Related Foot Pressures
Brad Manor[1,2], Hao Ying[1], Lewis Lipsitz[2], Chung-Kang Peng[2], Vera Novak[2], Xiaoying Wang[3], Jue Zhang[1], Jing Fang[1]
[1]Academy for Advanced Interdisciplinary Studies, Peking University, Beijing, China, [2]Beth Israel Deaconess Medical Center, Boston, MA, USA, [3]Peking University First Hospital, Beijing, China

533 Finger Somatotopic Map in the Human Cerebellum revealed with 7 Tesla fMRI
Wietske van der Zwaag[1], Roberto Martuzzi[2], Olaf Blanke[3], Rolf Gruetter[1], José Marques[1]
[1]University of Lausanne, Lausanne, Switzerland, [2]EPFL, Lausanne, Switzerland, [3]Department Of Neurology, Geneva, Switzerland

534 Multisite variability of a standard fMRI procedure in a clinical setting
Moritz Wurnig[1,2], Jakob Rath[1,2], Nikolaus Klinger[1,2], Ilse Höllinger[1,2], Alexander Geissler[1,2], Markus Aichhorn[3], Thomas Foki[1,2], Martin Kronbichler[3], Janpeter Nickel[4], Christian Siedentopf[5], Wolfgang Staffen[3], Michael Verius[5], Stephan Felber[6], Stefan Golaszewski[3], Florian Koppelstätter[5], Rudiger Seitz[4], Roland Beisteiner[1,2]
[1]Study Group Clinical fMRI, Department of Neurology, Medical University of Vienna, Vienna, Austria, [2]MR Center of Excellence, Medical University of Vienna, Vienna, Austria, [3]Department of Neurology, Christian-Doppler-Clinic, Salzburg, Austria, [4]Department of Neurology, Heinrich-Heine-University Dusseldorf, Duesseldorf, Germany, [5]Department of Radiology, Subdivision Neuroradiology, Medical University of Innsbruck, Innsbruck, Austria, [6]Institute for Diagnostic Radiology, Stiftungsklinikum Mittelrhein, Koblenz, Germany

535 Clinical fMRI: Evidence for a 7T benefit
Roland Beisteiner[1,2], Simon Robinson[3,2], Moritz Wurnig[1,2], Markus Hilbert[1,2], Katharina Merksa[1,2], Jakob Rath[1,2], Ilse Höllinger[1,2], Nikolaus Klinger[1,2], Siegfried Trattnig[3,2], Alexander Geissler[1,2]
[1]Study Group Clinical fMRI, Department of Neurology, Medical University of Vienna, Vienna, Austria, [2]MR Center of Excellence, Medical University of Vienna, Vienna, Austria, [3]Department of Radiology, Medical University of Vienna, Vienna, Austria

536 Processing of ambiguous social stimuli correlates with serum oxytocin and prefrontal activation
Simone Kühn[1], Christina Schilling[2], Rainer Landgraf[3], Andreas Heinz[4], Juergen Gallinat[5]
[1]Department of Experimental Psychology and Ghent Institute for Functional and Metabolic Imaging, Gent, Belgium, [2]Charité University Medicine, Berlin, Germany, [3]Max-Planck-Institute of Psychiatry, Berlin, Germany, [4]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany, [5]Charite Universitaetsmedizin Berlin, Berlin, Germany

537 FMRI to Investigate the Effects of Pleasant Chill-Inducing Music on Acute Pain in Healthy Volunteers
Gregory Lieberman[1], Hayley Perelman[1], John Mantegna[1], Michael Krauthamer[1], Nina LaRosa[1], Magdalena Naylor[1]
[1]University of Vermont, Burlington, VT, USA

538 Predicting the extent of activation derived from 100 scans from only 10 scans
Javier Gonzalez-Castillo[1], Peter Bandettini[1]
[1]Section on Functional Imaging Methods, National Institute of Mental Health, NIH, Bethesda, MD, United States

539 Resting-state functional MRI in the evaluation of patiens with systemic lupus erythematosus
Fernanda Rueda Lopes[1], Denis Pereira[2], Ramon Quaresma[3], Bruno Farnetano[4], Romeu Domingues[5], Emerson Gasparetto[6]
[1]UFRJ, [2]UFRJ, Rio de Janeiro, Brazil, [3]UFRJ, Rio de janeiro, Brazil, [4]UFRJ, RIo de janeiro, Brazil, [5]CDPI, Rio de janeiro, Brazil, [6]UFRJ / CDPI, Rio de Janeiro, Brazil

540 Frontoparietal functioning during working memory in schizophrenia and in non-affected siblings
Max de Leeuw[1], Matthijs Vink[2], Bram Zandbelt[3], René Kahn[4]
[1]UMC Utrecht, [2]Rudolf Magnus Institute of Neuroscience, Utrecht, Netherlands, [3]Utrecht, Netherlands, [4]Rudolf Magnus Institute of Neuroscience, University Medical Center Utrecht, Utrecht, Netherlands

541 Comparison of fMRI Image Quality Using a 32-Channel Head Coil versus an 8-Channel Head Coil
Yu-Chien Wu[1], Andrew Connolly[1], Paul Whalen[1], James Haxby[1]
[1]Dartmouth College, Hanover, NH USA

542 FMRI in Children with and without a History of Early Exposure to General Anesthetics
Nasser Kashou[1,2], Abigail Masunga[1], Mark Smith[1,2], Thomas Taghon[1,2]
[1]Nationwide Children's Hospital, Columbus, United States, [2]The Ohio State University, Columbus, United States

543 Intra operative use of functional MRI maps for surgical decision making
Laura Rigolo[1], Alexandra Golby[2], Isaiah Norton[1], Srinivasan Mukundan[3]
[1]Golby Lab, BWH Dept. Neurosurgery, Harvard Medical School, Boston, MA, [2]Brigham & Women's Hospital - Neurosurgery, Boston, MA, [3]Brigham & Women's Hospital - Radiology, Boston, MA

544 Emotion Regulation Circuits in Parental Brain – Timing, Sex, Early Life Experience and Behavior
James Swain[1], Pilyoung Kim[2], Ruth Feldman[3], Linda Mayes[4], Xin Wang[5], James Leckman[4]
[1]University of Michigan, Ann Arbor, United States, [2]NIH, Bethesda, MD, [3]Bar-Ilan University, Ramat Gan, Israel, [4]Yale University, New Haven, CT, [5]University of Michigan, Ann Arbor, MI

545 In the zone or zoned out? Performance variability and BOLD fluctuations in the default-mode network
Sarah Noonan[1], Monica Rosenberg[1], Joseph DeGutis[1], Michael Esterman[1]
[1]VA Boston Healthcare System, Boston, MA

546 Absence of fMRI BOLD Signal With Right Median Nerve Stimulation at Motor Threshold
Leo Ai[1], Hiroyuki Oya[1], Jinhu Xiong[1]
[1]University of Iowa, Iowa City

547 Cortical Reorganization of Hand Motor Function to Face Somatotopy in a Patient with Brain Injury
Ji Heon Hong[1], Mi Young Lee[2], Su Min Son[3], Sung Ho Jang[3]
[1]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Republic of Korea, [2]Department of Physical Therapy, College of Health and Therapy, Daegu Haany University, Daegu, Korea, Republic of, [3]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of

548 Are emotions associated with rest activity or interoception? An fMRI study in healthy subjects
Christine Wiebking[1], Moritz de Greck[2], Niall Duncan[3], Alexander Heinzel[4], Claus Tempelmann[5], Georg Northoff[6]
[1]Institute of Mental Health Research / Clinic of Psychiatry, Otto-von-Guericke University, Ottawa, Canada / Magdeburg, Germany., [2]Department of Psychology, Peking University, 5 Yiheyuan Road, Beijing, China, [3]Institute of Mental Health Research, University of Ottawa, Ottawa, Canada, [4]Department of Nuclear medicine, Heinrich-Heine University, Düsseldorf, Germany, [5]Department of Neurology II, Otto-von-Guericke University, Magdeburg, Germany, [6]University of Ottawa Institute of Mental Health Research, Ottawa, Canada

549 Language fMRI - Comparison between four language tasks
Mohammed Saad[1,2], Andrew DiMarco[3], Scott Faro[3], Deepika Nandiraju[3], Gerry Stefanatos[3], Feroze Mohamed[4], Chris Conklin[3]
[1]Temple University, Philadelphia, USA, [2]University of Alexandria, Alexandria, Egypt, [3]Temple University, Philadelphia, PA, [4]Temple University, Philadelphia, United States

550 Hand motor tasks for clinical fMRI: Comparison of two tasks and normative data in healthy adults
John West[1], Brenna McDonald[1], Kimberly Campbell[1], Yang wang[1], Kristine Mosier[1], Darren O'Neill[1], Jacob Kean[1], Andrew Kalnin[2], Andrew Saykin[1]
[1]Indiana University School of Medicine, Indianapolis, IN, [2]Ohio State University Medical Center, Columbus, OH

551 Dealing with motion and noise: Effects of ICA denoising and whole volume exclusion on BOLD fMRI
David Shirinyan[1], Susan Bookheimer[1]
[1]Departmen of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA

552 2-Hz Modulation Laser Acupuncture Induced Limbic system and Brainstem Activations
Chang-Wei Hsieh[1], Chao-Hsien Hsieh[2], Qwa-Fun Wang[3], Jyh-Horng Chen[2]
[1]Asia University, Taichung, Taiwan, [2]National Taiwan University, Taipei, Taiwan, Republic of China, [3]China Medical University, Taichung, Taiwan, Republic of China

553 Withdrawn

554 A method to evaluate spontaneous BOLD oscillations/frequencies of brain tumors
Todd Richards[1], James Fink[1], Clark Johnson[1], Jeff Stevenson[1], Kenneth Maravilla[1], Leanna Standish[2], Kenneth Krohn[1]
[1]University of Washington, Seattle, WA, [2]Bastyr University, Kenmore, WA

Imaging Methods

Diffusion MRI

555* K-Space and q-Space: Combining Ultra-High Spatial and Angular Resolution in Diffusion Imaging at 7T, (O-M1)
Robin Heidemann[1], Alfred Anwander[1], David Porter[2], Thorsten Feiweier[2], Gabriele Lohmann[1], Thomas Knösche[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Siemens Healthcare, Erlangen, Germany

556* Histological validation of DW-MRI tractography in human post-mortem tissue, (O-M1)
Arne Seehaus[1], Alard Roebroeck[2], Oriana Chiry[1], Dae-Shik Kim[3], Itamar Ronen[4], Hansjürgen Bratzke[5], Rainer Goebel[2], Ralf Galuske[1,6]
[1]Department of Biology, Technical University Darmstadt, Darmstadt, Germany, [2]Department of Cognitive Neuroscience, Faculty of Psychology & Neuroscience, Maastricht University, Maastricht, Netherlands, [3]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of, [4]Leiden University Medical Center, Leiden, Netherlands, [5]Institute of Forensic Medicine, University of Frankfurt Medical School, Frankfurt, Germany, [6]Max-Planck-Institute for Brain Research, Frankfurt, Germany

557* Isotropic Sub-Millimeter Diffusion MRI in Humans at 7T, (O-T2)
Robin Heidemann[1], Alfred Anwander[1], Cornelius Eichner[1], Ralf Luetzkendorf[2], Thorsten Feiweier[3], Thomas Knösche[1], Johannes Bernarding[2], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Department for Biometry and Medical Informatics, OvG University, Magdeburg, Germany, [3]Siemens Healthcare, Erlangen, Germany

558 Tract-based statistical analyzes in dMRI in autism spectrum disorder
Demian Wassermann[1], Pablo Barttfeld[2], Anne-Charlotte PHILIPPE[3], Jorge Calvar[4], Ramon Leiguarda[5], Bruno Wicker[6], Mariano Sigman[7], Rachid Deriche[8]
[1]Harvard Medical School, Boston, MA, [2]Integrative neuroscience Laboratory, Physics Dept. University of Buenos Aires, Buenos Aires, Argentina, [3]INRIA, Sophia-Antipolis, France, [4]Fundación parala Luchacontralas Enfermedades Neurológicasdela Infancia, Buenos Aires, Argentina, [5]Fundación para la Lucha contra las Enfermedades Neurológicasdela Infancia, Buenos Aires, Argentina, [6]INCM CNRS, Marseille, France, [7]Integrative Neuroscience Laboratory, Physics Dept. University of Buenos Aires, Buenos Aires, Argentina, [8]INRIA Sphia Antipolis, Nice, France

559 White Matter Integrity is Strongly Associated with Regional Cerebral Blood Flow Independently of Age
Jean Chen[1], H. Diana Rosas[2], David Salat[1]
[1]Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, United States, [2]Department of Neurology, Massachusetts General Hospital, Charlestown, United States

560 High-Resolution Diffusion-Weighted Imaging at 7T--Issues of Slice Thickness and Fat Suppression
Cornelius Eichner[1], Dimo Ivanov[1], Thorsten Feiweier[2], Alfred Anwander[1], Thomas Knösche[1], Robert Turner[1], Robin Heidemann[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Siemens Healthcare, Erlangen, Germany

561 White Matter Integrity of Frontal-striatal Circuitry in Adults with ADHD: A DSI Tractography Study
Chen-Hao Wu[1], Susan Shur-Fen Gau[2], Yi-Huan Wu[3], Yu-Chun Lo[1], Fang-Cheng Yeh[4], Wen-Yang Chiang[5], Chung-Ming Chen[1], Wen-Yih Isaac Tseng[1,6,7]
[1]Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan, [2]Department of Psychiatry, National Taiwan University Hospital and College of Medicine, Taipei, Taiwan, [3]School of Medicine, National Taiwan University College of Medicine, Taipei, Taiwan, [4]Department of Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA, [5]Department of Biomedical Engineering, Texas A&M University, College Station, TX, [6]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, [7]Department of Medical Imaging, National Taiwan University Hospital, Taipei, Taiwan

562 HPA-axis tonus linked to hippocampal microstructural asymmetry
Kathrine Madsen[1,2,3], Terry Jernigan[4,2,1,3], Pernille Iversen[1], Vibe Frokjaer[2,5], Gitte Knudsen[2,5,3], Hartwig Siebner[1,2,3], William Baaré[1,2,2]
[1]Danish Research Centre for Magnetic Resonance, Copenhagen University Hospital, Hvidovre, Denmark, [2]Center for Integrated Molecular Brain Imaging, Copenhagen, Denmark, [3]Faculty of Health Sciences, University of Copenhagen, Copenhagen, Denmark, [4]Veterans Affairs Center of Excellence for Stress and Mental Health, La Jolla, CA, [5]Neurobiology Research Unit, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark

563 Surface-based mean diffusivity analysis in Alzheimer's disease without CSF contamination effect
Oh-Hun Kwon[1], Jong-Min Lee[2], Uicheul Yoon[2], Sang Won Seo[3], Duk L. Na[3], Sun I. Kim[2]
[1]Hanyang University, Republic Of Korea, [2]Hanyang University, Seoul, Korea, Republic of, [3]Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of

564 Comparison of Diffusion Tractography and Manganese Tracing
Thomas Knösche[1], Alfred Anwander[1], Matthew Liptrot[2], Tim Dyrby[2]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Danish Research Centre for Magnetic Resonance, Copenhagen University Hospital, Hvidovre, Denmark

565 Increased BMI is associated with globally decreased white matter integrity
Timothy Verstynen[1], Andrea Weinstein[1], Walter Schneider[1], John Jakicic[1], Kirk Erickson[1]
[1]University of Pittsburgh, Pittsburgh, PA

566 Differential Development of Human Brain White Matter Tracts
Davide Imperati[1], Stan Colcombe[2], Clare Kelly[1], Adriana Di Martino[1], F. Xavier Castellanos[1,2], Michael Milham[1,2]
[1]Institute for Pediatric Neuroscience at NYU Langone Medical Center, New York, NY, [2]Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY

567 Connectivity of Broca's area Measured by Electrophysiology and Diffusion Tensor Imaging
Christopher Conner[1], Michael DiSano[2], Thomas Pieters[2], Timothy Ellmore[3], Nitin Tandon[4]
[1]UT Houston, [2]UTHSCH, Houston, TX, [3]University of Texas Medical School at Houston, Houston, TX, [4]The University Of Texas Health Science Center, Houston, United States

568 Atlas-Based Fiber Clustering for Multi-Subject Analysis of HARDI Images
Gautam Prasad[1], Neda Jahanshad[1], Iman Aganj[2], Christophe Lenglet[3], Guillermo Sapiro[4], Paul Thompson[5]
[1]Laboratory of Neuro Imaging, Department of Neurology, UCLA School of Medicine, Los Angeles, CA, [2]Deptartment of Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN, [3]Center for Magnetic Resonance Research, Department of Radiology, U of Minnesota Medical School, Minneapolis, MN, [4]Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN, [5]Laboratory of Neuro Imaging - UCLA School of Medicine, Los Angeles, CA

569 Quantitative Evaluation of EPI Distortion Correction using DTI with 2 phase encode b=0 scans
Wanyong Shin[1], Erik Beall[1], Ken Sakaie[1], Mark Lowe[1]
[1]Cleveland Clinic Foundatoin, Cleveland, United States

570 Longitudinal Change of FA during Adolescence – A Preliminary DTI Study Based on TBSS method
Akila Rajagopal[1], Weihong Yuan[1], Christopher Adamson[2], Scott Holland[1]
[1]Pediatric Neuroimaging Research Consortium, Cincinnati, United States, [2]Murdoch Childrens Research Institute, Parkville, Victoria

571 Language lateralization determined by tract-based spatial statistics of the arcuate fasciculus
Michael DiSano[1], Timothy Ellmore[1], Thomas Pieters[1], Joshua Breier[1], Nitin Tandon[2]
[1]University of Texas Medical School at Houston, Houston, TX, [2]University of Texas Medical School at Houston, Houston, United States

572 Probabilistic Tractography using the Tensor Distribution Function in Multiple-Shell HARDI
Liang Zhan[1], Johnson GadElkarim[2], Iman Aganj[3], Christophe Lenglet[4], Guillermo Sapiro[5], Noam Harel[3], Arthur Toga[6], Alex Leow[2], Paul Thompson[7]
[1]University of California, Los Angeles, [2]University of Illinois-Chicago, Chicago, IL, [3]University of Minnesota, Minneapolis, United States, [4]Center for Magnetic Resonance Research, Department of Radiology, U of Minnesota Medical School, Minneapolis, MN, [5]Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN, [6]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [7]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States

573 Mirror Neuron System Related to Socio-Communication Function in Boys with High-Functioning Autism

Li-Ting Liu[1], Susan Shur-Fen Gau[2,3], Fang-Cheng Yeh[4], Wen-Yang Chiang[5], Ay-Woan Pan[6], Wen-Yih Tseng[7,8,9]
[1]National Taiwan University, [2]Department of Psychiatry, National Taiwan University Hospital and College of Medicine, Taipei, Taiwan, Republic of China, [3]Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan, Republic of China, [4]Department of Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA, [5]Department of Biomedical Engineering, Texas A&M University, College Station, TX, [6]School of Occupational Therapy, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [7]Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan, Republic of China, [8]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [9]Department of Medical Imaging, National Taiwan University Hospital, Taipei, Taiwan, Republic of China

574 Disrupted Connectivity in the Right Hemisphere Network in Schizophrenia Revealed by DSI and fMRI

Kayako Matsuo[1], S.H. Annabel Chen[2], Chieh-En Tseng[3], Wei-An Wang[3], Chih-Min Liu[4], Chen-Chung Liu[5], Hai-Go Hwu[5], Wen-Yih Isaac Tseng[1]
[1]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [2]Division of Psychology, School of Humanities and Social Sciences, Nanyang Technological University, Singapore, Singapore, [3]Biomedical Imaging and Radiological Sciences, National Yang-Ming University, Taipei, Taiwan, Republic of China, [4]Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan, Republic of China, [5]Department of Psychiatry, National Taiwan University, Taipei, Taiwan, Republic of China

575 Cigarette smoking associated with microstructural white matter integrity: A DTI study

Michael Deppe[1], Heike Wersching[2], Simon Keller[1], Siawoosh Mohammadi[3], Jan Gerdes[1], Harald Kugel[4], Stefan Knecht[1]
[1]Department of Neurology, University of Münster, Münster, Germany, [2]Department of Epidemiology and Social Medicine, University of Münster, Münster, Germany, [3]Wellcome Trust Centre for Neuroimaging, London, United Kingdom, [4]Dept. of Clinical Radiology, University of Muenster, Münster, Germany

576 Reproducibility of Fractional Anisotropy in a 3T MR scanner

Maria López-Titla[1], Christian Estrada-Hernández[2], Maria de Lourdes Martinez[3], Fernando Barrios[4], Sarael Alcauter[3,4]
[1]Facultad de Ciencias, Universidad Nacional Autonoma de Mexico, Mexico D.F., Mexico, [2]Servicios Oncológicos del Noreste, Reynosa, Tamaulipas, Mexico, [3]Instituto Nacional de Psiquiatria, INPRF., Mexico D.F., Mexico, [4]Universidad Nacional Autonoma de Mexico, QUERETARO, QRO

577 Does White Matter Change Following Motor Training?: A Pilot Study

Kenneth Weber[1], Xue Wang[2], Maura Casadio[3], Ferdinando Mussa-Ivaldi[3], Todd Parrish[2]
[1]Interdepartmental Neuroscience Program, Northwestern University, Chicago, IL, USA, [2]Department of Radiology, Northwestern University, Chicago, IL, USA, [3]Sensory Motor Performance Program, Rehabilitation Institute of Chicago, Chicago, IL, USA

578 Verbal IQ correlates more strongly with white matter integrity in HARDI after fiber demixing

Liang Zhan[1], Neda Jahanshad[1], Arthur Toga[2], Katie McMahon[3], Greig de Zubicaray[3], Nicholas Martin[4], Margaret Wright[4], Alex Leow[5], Paul Thompson[2]
[1]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [2]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [3]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [4]Queensland Institute of Medical Research, Brisbane, Australia, [5]University of Illinois-Chicago, Chicago, IL

579 Isotropic and High Resolution DTI of Human Brain using Turboprop

Ashish Tamhane[1], Xiaodong Guo[1], Michael Vannier[1], Jia-Hong Gao[1]
[1]The University of Chicago, Chicago, United States

580 Fractional Anisotropy Profile: A thorough description of the white matter integrity of fiber tracts

Aki Nikolaidis[1], Eric Hsu[2], Yao Chia Shih[3], Fang-Cheng Yeh[4], Wen-Yih Tseng[1]
[1]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [2]Tsing Hua University, Hsing Chu City, Taiwan, Republic of China, [3]National Taiwan University Institute of Biomedical Engineering, Taipei City, Taiwan, Republic of China, [4]Department of Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA, USA

581 Sex differences in fractional anisotropy: where males are left in a bundle

Nicolas Cherbuin[1], Walter Abhayaratna[2], Kaarin Anstey[1]
[1]Centre for Mental Health Research, Australian National University, Canberra, Australia, [2]Academic Unit of Internal Medicine, Canberra Hospital, Canberra, Australia

582 White matter CBF is inversely correlated with structural and functional connectivity

Hanzhang Lu[1], Sina Aslan[1]
[1]University of Texas Southwestern Medical Center, Dallas, United States

583 Constrained spherical deconvolution based tractography and cognition in Alzheimer's disease
Yael Reijmer[1], Alexander Leemans[2], Sophie Heringa[3], Ilse Wielaard[4], Ben Jeurissen[5], H-Dineke Koek[3], Geert Jan Biessels[3]
[1]University Medical Center Utrecht, Utrecht, the Netherlands, [2]Image Sciences Institute University Medical Center Utrecht, Utrecht, Netherlands, [3]University Medical Center Utrecht, Utrecht, Netherlands, [4]Utrecht University, Utrecht, Netherlands, [5]Vision Lab University of Antwerp, Antwerp, Belgium

584 A New Method to Improve Reproducibility of Tractography-based Analysis of White Matter Integrity
Aki Nikolaidis[1], Yao Chia Shih[2], Eric Hsu[3], Fang-Cheng Yeh[4], Wen-Yih Isaac Tseng[1]
[1]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [2]Institute of Biomedical Engineering, National Taiwan University, Taipei City, Taiwan, Republic of China, [3]Department of Biomedical Engineering and Environmental Sciences, Hsinchu, Taiwan, Republic of China, [4]Department of Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA, USA

585 White Matter Abnormality in a Group of Young Drug-Naïve ADHD Patients
Manzar Ashtari[1], Carolyn McIlree[2], Melissa Naraine[3], Laura Cyckowski[4], Ruth Milanaik[3], Li Kan[3], Jeffrey Newcorn[5], Josephine Elia[1], Andrew Adesman[3]
[1]Children's Hospital of Philadelphia, Philadelphia, PA, [2]University of Vermont School of Medicine, Burlington, VT, [3]North Shore LIJ Health Systems, New Hyde Park, NY, [4]Children's Hospital of Philadelphia, [5]Mount Sinai School of Medicine, New York City, NY

586 A Diffusion Spectrum Tractography Study on Fiber Integrity of the Genu in Schizophrenia
Jhih-Wei He[1], C-M. Liu[2], H-G. Hwu[2], C-C. Liu[2], Fang-Cheng Yeh[3], Wen-Yang Chiang[4], W-Y. Tseng[5,1,6]
[1]Institute of Biomedical engineering, National Taiwan University, Taipei, Taiwan, [2]Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan, [3]Department of Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA, [4]Department of Biomedical Engineering, Texas A&M University, College Station, TX, [5]Department of Medical Imaging, National Taiwan University Hospital, Taipei, Taiwan, [6]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan

587 The Fiber Pathways of the Forebrain as a Woven Orthogonal Grid
Van Wedeen[1,2], Guangping Dai[1,2], Ruopeng Wang[3,2], Douglas Rosene[4], Jon Kaas[5], Wen-Yih Tseng[6,7]
[1]Department of Radiology, Massachusetts General Hospital and the Harvard Medical School, Boston, MA, [2]Martinos Center for Biomedical Imaging, Charlestown, MA, [3]Massachusetts General Hospital, Boston, MA, [4]Department of Anatomy and Neurobiology, Boston University Medical Campus, Boston, MA, [5]Department of Psychology, College of Arts and Sciences, Vanderbilt University, Nashville, TN, [6]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, [7]Department of Medical Imaging, National Taiwan University Hospital, Taipei, Taiwan

588 In vivo DWI at 7T with a 70 mT/m gradient coil: 24- vs 32-channel head coil
Ralf Luetzkendorf[1], Robin Heidemann[2], Alfred Anwander[2], Joerg Stadler[3], Thorsten Feiweier[4], Oliver Speck[5], Johannes Bernarding[1]
[1]Department for Biometry and Medical Informatics, OvG University, Magdeburg, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]Leibniz Institute for Neurobiology, Magdeburg, Germany, [4]Siemens Healthcare, Erlangen, Germany, [5]Biomedical Magnetic Resonance, OvG University, Magdeburg, Germany

589 Alternate grids for diffusion weighted imaging and associated reconstruction algorithms
Cory Ahrens[1], Stefan van der Walt[2], Fernando Perez[3]
[1]Tech-X Corporation, Boulder, CO, [2]University of Stellenbosch, Stellenbosch, South Africa, [3]University of California, Berkeley, Oakland, United States

590 The Voxel-Based Comparison of Fractional Anisotropy between Elderly and Young Using LDDMM
Yao-Chia Shih[1,2], Makoto Miyakoshi[3], Y.C. Hsu[4], Kayako Matsuo[2], Annabel Chen[5], Toshiharu Nakai[3], Wen-Yih Isaac Tseng[2,1,6]
[1]Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan, Republic of China, [2]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [3]National Center for Geriatrics and Gerontology, Aichi, Japan, [4]epartment of Biomedical Engineering and Environmental Sciences, National Tsing Hua University, Hsinchu, Taiwan, Republic of China, [5]Division of Psychology, School of Humanities and Social Sciences, Nanyang Technological University, Singapore, Singapore, [6]Department of Medical Imaging, National Taiwan University Hospital, Taipei, Taiwan, Republic of China

591 Reproducibility of Diffusion Tensor Measurements with Geographically Separated MRI Scanners
Jeffry Alger[1], Teena Moody[2], Jorge Almeida[3], Mary Phillips[3], Lori Altshuler[2]
[1]Department of Neurology, David Geffen School of Medicine at UCLA, Los Angeles, United States, [2]Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine at UCLA, Los Angeles, CA, [3]University of Pittsburgh, Pittsburgh, PA

592 Callosal contributions to bimanual coordination: influence of task complexity and sensory feedback
Jolien Gooijers[1], Karen Caeyenberghs[2], Alexander Leemans[3], Helene Sisti[2], Marcus Heitger[2], Stephan Swinnen[2]
[1]KU Leuven, [2]KU Leuven, Leuven, Belgium, [3]University Medical Center Utrecht, Utrecht, Netherlands

593 Clinical Quality Fiber Tracking and Connectome Mapping in Neurosurgery & Traumatic Brain Injury
Walter Schneider[1], Kevin Jarbo[1], Samuel Sin[2], Timothy Verstynen[1], Sudhir Pathak[1], Juan Fernandez-Miranda[2], David Okonkwo[2], Fernando Boada[2]
[1]University of Pittsburgh, Pittsburgh, PA, [2]University of Pittsburgh Medical Center, Pittsburgh, PA

594 Analysis of diffusion data in Parkinson's Disease: multiple directions or multiple acquisitions?
Charlotte Rae[1], Marta Correia[1], Ellemarije Altena[2], Laura Hughes[1,2], James Rowe[1,2]
[1]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom, [2]Department of Clinical Neurosciences, University of Cambridge, Cambridge, United Kingdom

595 Histogrambased analysis of DTI-derived values using different parameters for data acquisition
Alexandra Hellerbach[1], Davide Laneri[2], Miriam Bauer[3], Andreas Jansen[1], Jens Sommer[1]
[1]Department of Psychiatry and Psychotherapy, Section of BrainImaging, University of Marburg, Marburg, Germany, [2]Department of Psychiatry and Psychotherapy, Section of BrainImaging, University of Marburg, Marburg, Germany, [3]Department of Neurosurgery, University of Marburg, Marburg, Germany

596 ROC Analysis of DTI Metrics in Brain Tissue: Optimal Measures for Gray and White Matter
Mark Lowe[1], Ken Sakaie[2], Micheal Phillips[3]
[1]Cleveland Clinic Foundatoin, Cleveland, United States, [2]Cleveland Clinic, CLEVELAND, OH, [3]Cleveland Clinic, Cleveland, OH

597 Probabilistic maps of connectivity with visual cortex in patients with Periventricular Leukomalacia
Minhee Um[1], MAENG-KEUN OH[2], Jong Doo Lee[1,3], Hae-Jeong Park[1,3]
[1]BK21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Republic Of Korea, [2]Yonsei University Health System, Seoul, Republic Of Korea, [3]Department of Radiology and Division of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Republic Of Korea

598 A Comparison of Pre- Versus Post-Perfusion DTI Tractography in Cadaveric Brain Tissue
Nathan Hageman[1], Jonathan Wisco[2], Arthur Toga[1]
[1]Laboratory of Neuroimaging, UCLA School of Medicine, Los Angeles, CA, [2]Department of Anatomy, UCLA School of Medicine, Los Angeles, CA

599 Can Psychotherapy Change White Matter in the Chronic Pain Human Brain? A DTI Study
Gregory Lieberman[1], Trevor Andrews[1,2], Michael Krauthamer[1], Christopher Filippi[1], John Mantegna[1], Magdalena Naylor[1]
[1]University of Vermont, Burlington, VT, USA, [2]Philips Healthcare, Best, Netherlands

600 Clinical usefulness of diffusion tensor imaging in preterm infants with bilateral PVL
Hee Kyung Cho[1], Su Min Son[1], Sung Ho Jang[1], Sang Ho Ahn[1], Yoon Woo Cho[1], Sang Seok Yeo[1]
[1]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of

601 White matter changes in patients with Friedreich ataxia after treatment with erythropoietin
Karl Egger[1], Tom Ballinger[2], Christian Kremser[3], Marek Kubicki[2], Werner Nachbauer[3], Michael Schocke[4], Martha Shenton[2]
[1]Brigham and Womens Hospital, [2]PNL, Boston, United States, [3]MUI, Innsbruck, Austria, [4]Medical University Innsbruck, Innsbruck, Austria

602 High spatial resolution diffusion weighted imaging with removal of correlated noise and its application in the case of mild form of Canavan Disease
Goran Vucurevic[1], Georg Kutschke[2], Wibke Müller-Forell[3]
[1]Institute of Neuroradiology, Mainz, Germany, [2]Children Hospital, Mainz, Germany, [3]Institute of Neuroradiology, Mainz, Germany

603 White Matter Integrity and Five-Factor Personality Measures in Healthy Adults
Jiansong Xu[1], Marc Potenza[1]
[1]Yale University, New Haven, CT

604 General strategy for the distortion correction of the DWI using simulated DWI data
Haewon Nam[1], Hae-Jeong Park[2]
[1]IMS, Ewha Womans University, Seoul, Republic of Korea, [2]Yonsei University, Seoul, Republic Of Korea

605 Diffusion tensor image finding in neurologically asymptomatic patients with end stage renal disease
Han Sun Kim[1], Dai Seg Bai[2], Ji Heon Hong[1], Jin Young Jeong[2], Jong Won Park[3], Sung-Ho Jang[1]
[1]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of, [2]Department of psychiatry, College of Medicine, Yeungnam University, Daegu, Korea, Republic of, [3]Department of Internal Medicine, College of Medicine, Yeungnam University, Daegu, Korea, Republic of

606 Mammillotegmental Tract in Human Brain : Diffusion Tensor Tractography Study
Jeong Pyo Seo[1], Mi Young Lee[2], YONG HYUN KWON[3], Sung Ho Jang[4], HYEOK GYU KWON[1], Su Min Son[4]
[1]Department of Physical Therapy, Graduate School of Rehabilitation Science, Daegu University, Daegu, Korea, Republic of, [2]Department of Physical Therapy, College of Health and Therapy, Daegu Haany University, Daegu, Korea, Republic of, [3]Department of Physical Therapy, Yeungnam College of Science and Technology, Daegu, Korea, Republic of, [4]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of

607 Diffusion tensor tractography demonstrated the focal lesion of medial lemniscus in patients
Su Min Son[1], Sung Ho Jang[1], Hee Kyung Cho[1], Yong Jae Jung[1], Dong Gyu Lee[1], Sang Seok Yeo[1]
[1]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of

Imaging Methods

Non-BOLD fMRI

608* Comparison of DfMRI, SE- and GRE-BOLD fMRI responses using group analysis, (O-M1)
Toshihiko Aso[1], Shin-ichi Urayama[2], Hidenao Fukuyama[3], Denis Le Bihan[4]
[1]Human Brain Research Center, Kyoto University Graduate School of Medicine, [2]Kyoto University, [3]HBRC Kyoto University School Of Medicine, Kyoto, Japan, [4]Neurospin/CEA, Gif Sur Yvette, France

609 IR-TSE VASO fMRI of the motor cortex
Fabiola Cretti[1], Paul E. Summers[1], Carlo A. Porro[1]
[1]Università Modena Reggio Emilia, Modena, Italy

610 White matter fMRI using dual-spin echo EPI
Guoxiang Liu[1], Tsutom Murata[1]
[1]National Institute of Information and Communications Technology, Kobe, Japan

611 Grey and white matter cerebrovascular reactivity mapping in cardiovascular disease patients
Udunna Anazodo[1,2], J K Shoemaker[3], N Suskin[4], J Wang[5], K St Lawrence[1,2]
[1]Lawson Health Research Institute, London, Ontario, [2]Department of Medical Biophysics, UWO, London, Ontario, Canada, [3]Neurovascular Research Laboratory, School of Kinesiolog, London, Ontario, [4]London Health Science Cardiology Rehabilitation Program, London, Ontario, [5]Department of Neurology, UCLA, Almanson-Lovelace Brain Mapping Center, London, Ontario

612 Functional MRI of the Thoracic Spinal Cord During Vibration Sensation
Jennifer Kornelsen[1], Stephen Smith[2], Theresa McIver[2], Uta Sboto-Frankenstein[1], Donghui Yin[1], Peter Latta[1], Boguslaw Tomanek[1]
[1]National Research Council Canada, Institute for Biodiagnostics, Winnipeg, Canada, [2]University of Winnipeg, Winnipeg, Canada

613 Theoretical solution for cross-term suppression in twice-refocusing DW sequence
Shin-ichi Urayama[1], Tetsuya Yamamoto[2], Toshihiko Aso[1], Hidenao Fukuyama[1], Denis Le Bihan[3,1]
[1]HBRC Kyoto University School Of Medicine, Kyoto, Japan, [2]Kokoro Research Center, Kyoto University, Kyoto, Japan, [3]Neurospin/CEA, Gif Sur Yvette, France

614 Insights into Brain Processing of Acute and Chronic Itch Revealed by Arterial Spin Labeled MRI
ALEXANDRU PAPOIU[1], Robert Coghill[1], Liliana Banari[1], Robert Kraft[2], Gil Yosipovitch[1]
[1]Wake Forest University School of Medicine, Winston-Salem, NC, [2]Wake Forest University & Virginia Tech, Winston-Salem, NC

Modeling and Analysis Methods

Image Registration and Computational Anatomy

615 Model-driven Conformal Parameterization of the Cortical Surface**
Guillaume Auzias[1], Julien Lefèvre[1], Arnaud Le Troter[1], Jean Régis[2], Olivier Coulon[1]
[1]LSIS lab, CNRS, Marseille, France, [2]Stereotactic and Functional Neurosurgery Department, Timone Hospital, A.P.M., Marseille, France

616 Whole Brain Diffeomorphic Mapping via the integration of Sulcal Curves, Cortical Surfaces and Images**
Jia Du[1], Anqi Qiu[1,2,3]
[1]Division of Bioengineering, National University of Singapore, Singapore, Singapore, [2]Clinical Imaging Research Center, National University of Singapore, singapore, Singapore, [3]Singapore Institute for Clinical Sciences, the Agency for Science, Technology and Research, Singapore, Singapore

617 Automatic Surface-based Interhemispheric Registration with FreeSurfer
Douglas Greve[1], Mert Sabuncu[2], Randy Buckner[3], Bruce Fischl[4]
[1]Massachusetts General Hospital, Harvard Medical School, Boston, MA, [2]Massachusetts General Hospital, Boston, MA, [3]Harvard University, Department of Psychology, Cambridge, MA, [4]Massachusetts General Hospital, Harvard Medical School, MIT HST/CSAIL, Boston, United States

618 A graph matching-based method for sulcal pattern analysis: Abnormal sulcal pattern in polymicrogyria
Kiho Im[1], Michael Paldino[2], Rudolph Pienaar[3], Patricia Grant[4]
[1]Children's Hospital Boston, Harvard Medical School, Boston, USA, [2]Children's Hospital Boston, Boston, United States, [3]Children's Hospital Boston, Boston, MA, [4]Fetal-Neonatal Neuroimaging & Developmental Science Center, Children's Hospital Boston, Boston, MA

619 Searching scale space changes everything
Lu Zhao[1], Maxime Boucher[1], Pedro Rosa-Neto[1], Alan Evans[1]
[1]McGill University, Montreal, Canada

620 Do manual and voxel-based morphometry measure the same – a prove of concept study
Holger Mohr[1], Niels Focke[2], Sarah Trost[1], Walter Paulus[2], Peter Falkai[1], Oliver Gruber[1]
[1]Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Göttingen, Germany, [2]Dept. of Clinical Neurophysiology, Georg August University, Göttingen, Germany

621 Comparison of cortical surface reconstructions from MP2RAGE data at 3T and 7T
Kyoko Fujimoto[1], Jonathan Polimeni[1,2], Andre van der Kouwe[1,2], Tobias Kober[3,4], Martin Reuter[1,5,6], Thomas Benner[1,2], Bruce Fischl[1,2,6], Lawrence Wald[1,2,7]
[1]A.A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, United States, [2]Department of Radiology, Harvard Medical School, Boston, MA, United States, [3]Laboratory for functional and metabolic imaging, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, [4]Advanced Clinical Imaging Technology, Siemens Suisse SA - CIBM, Lausanne, Switzerland, [5]Department of Neurology, Massachusetts General Hospital, Boston, MA, United States, [6]Computer Science and AI Lab (CSAIL), Massachusetts Institute of Technology, Cambridge, MA, United States, [7]Harvard-MIT Division of Health Sciences and Technology, Massachusetts Institute of Technology, Cambridge, MA, United States

622 Unbiased Longitudinal Processing of Structural MRI Data
Martin Reuter[1,2], H. Diana Rosas[1], Bruce Fischl[1,2]
[1]MGH/HMS/MIT Athinoula A. Martinos Center for Biomedical Imaging, Charlestown, MA, [2]Massachusetts Institute of Technology, Cambridge, MA

623 Tetrahedral Mesh-based Morphometry of Brain Surfaces and Volumes
Anand Joshi[1], Carl Lederman[1], Ivo Dinov[1], Shantanu Joshi[1], Arthur Toga[1], John Van Horn[1]
[1]UCLA School of Medicine, Department of Neurology, Los Angeles, United States

624 Atlas-based Clustering of Sulcal patterns – Application to the Left Inferior Frontal Sulcus
Olivier Coulon[1,2], Vladimir Fonov[2], Louis Collins[2]
[1]LSIS lab, CNRS, Marseille, France, [2]McConnell Brain Imaging Centre, Montreal, Canada

625 A Unified Variational Approach to Structural Brain Registration
Carl Lederman[1], Anand Joshi[1], Ivo Dinov[1], Kevin Chan[1], Luminita Vese[1], Arthur Toga[2], John Van Horn[1]
[1]University of California, Los Angeles, Los Angeles, CA, [2]UCLA School of Medicine, Department of Neurology, Los Angeles, CA

626 Is manual landmark labelling necessary for optimal macro-anatomical cortex alignment?
Martin Frost[1], Rainer Goebel[1]
[1]Maastricht University, Maastricht, Netherlands

627 A Modified SOBI Method for Structural Data on the Cerebral Cortex
David Wheland[1], Dimitrios Pantazis[2], Richard Leahy[1]
[1]University of Southern California, Los Angeles, United States, [2]McGovern Institute for Brain Research, Boston, MA

628 Diffeometric Anatomical Registration on the Surface
Rachel Yotter[1], Paul Thompson[2], Christian Gaser[1]
[1]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Jena, Germany, [2]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States

629 Using Curvature Weighted Meshes in a Dijkstra-based Similarity Measure for FreeSurfer Surfaces
Rudolph Pienaar[1], Daniel Ginsburg[2], Patricia Grant[3]
[1]Childrens Hospital Boston, Boston, United States, [2]Children's Hospital Boston, Boston, MA, [3]Fetal-Neonatal Neuroimaging & Developmental Science Center, Children's Hospital Boston, Boston, MA

630 Strategies for Robust Structural-to-Functional Image Registration in fMRI
Wen-Ming Luh[1], Kristen Duthie[1], Javier Gonzalez-Castillo[1], Chia-Yueh Carlton Chu[1], Ziad S. Saad[1], Peter Bandettini[1]
[1]National Institutes of Health, Bethesda, MD

631 Individualized Localization and Surface-based Registration of Semi-chronic Intracranial Electrodes
Andrew Dykstra[1,2], Alexander Chan[1,2], Rodrigo Zepeda[2], Corey Keller[2], Brian Quinn[3], Sydney Cash[2]
[1]Harvard-MIT Division of Health Sciences and Technology, Cambridge, MA, [2]Cortical Physiology Laboratory, Department of Neurology, Massachusetts General Hospital and Harvard Medical School, Boston, MA, [3]Comprehensive Epilepsy Center, New York University School of Medicine, New York, NY

632 A comparative analysis of methods used to localize subdural electrodes onto the cortical surface
Thomas Pieters[1], Michael DiSano[1], Christopher Conner[1], Timothy Ellmore[1], Nitin Tandon[1]
[1]University of Texas Medical School at Houston, Houston, TX

633 Comparison of registration algorithms for capturing intraoperative brain shift
Arne Hans[1], Neil Weisenfeld[1], Mark Alexiuk[2], John Saunders[2], Einat Liebenthal[3], Adam Wittek[4], Grand Joldes[4], Karol Miller[4], Simon Warfield[1]
[1]Children's Hospital Boston and Harvard Medical School, Boston, MA, USA, [2]IMRIS, Winnipeg, Canada, [3]Medical College of Wisconsin, Milwaukee, United States, [4]University of Western Australia, Perth, Australia

634 Computational Model of Brain Atrophy
Veronika Brázdová[1], Jorge Manuel Cardoso[1], Marie Chupin[2], Sebastien Ourselin[3], Louis Lemieux[4]
[1]UCL, London, United Kingdom, [2]UPMC, Paris, France, [3]Centre for Medical Image Computing, London, [4]UCL Institute of Neurology, London, United Kingdom

635 Voxel-based volumetric results without/with image correction using the two segmentation algorithms
Takashi Shizukuishi[1], Osamu Abe[1], Hidenori Yamasue[2], Hidemasa Takao[3], Takuya Aizawa[1], Masakuni Sakaguchi[1], Masami Goto[4], Hiroki Sasaki[3], Wataru Gonoi[3], Hiroyuki Kabasawa[5], Kiyoto Kasai[2], Shigeki Aoki[6]
[1]Nihon University School of Medicine Department of Radiology, Tokyo, Japan, [2]University of Tokyo Department of Neuropsychiatry, Tokyo, Japan, [3]University of Tokyo Department of Radiology, Tokyo, Japan, [4]University of Tokyo Hospital Department of Radiological Technology, Tokyo, Japan, [5]Japan Applied Science Laboratory, GE Yokogawa Medical Systems Ltd., Tokyo, Japan, [6]Juntendo University Department of Radiology, Tokyo, Japan

636 Brain extraction via deformable registration
Leonid Teverovsky[1], Julie Price[2], Howard Aizenstein[3], Meryl Butters[3], Robert Tamburo[4], Oscar Lopez[3], James Becker[3]
[1]Carnegie Mellon University, Pittsburgh, PA, [2]University of Pittsburgh Medical Center, Pittsburgh, PA, [3]University of Pittsburgh, Pittsburgh, PA, [4]Intel, Pittsburgh, PA

Modeling and Analysis Methods

Motion Correction and Preprocessing

637 Dynamic unwarping of multi echo EPI data
Eelke Visser[1,2], Benedikt Poser[3,4,1], Markus Barth[1,4], Marcel Zwiers[1,2]
[1]Donders Institute for Brain, Cognition and Behaviour, Radboud University Nijmegen, Nijmegen, Netherlands, [2]Department of Cognitive Neuroscience, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands, [3]University of Hawaii, John A. Burns School of Medicine, Honolulu, Hawaii, United States, [4]Erwin L Hahn Institute for Magnetic Resonance Imaging, University Duisburg-Essen, Essen, Germany

638 The effects of preprocessing optimization on test-retest reliability in fMRI
Nathan Churchill[1], Anita Oder[2], Robyn Spring[3], Stephen Strother[4]
[1]University of Toronto, [2]Rotman Research Institute, Toronto, Ontario, [3]University of Toronto, Toronto, Ontario, [4]Rotman Reserch Institute, Baycrest, Toronto, Canada

639 A GPU Accelerated Motion Correction Algorithm for Real-time fMRI
Dustin Scheinost[1], Michelle Hampson[2], Jitendra Bhawnani[2], Maolin Qiu[2], R. Todd Constable[3], Xenophon Papademetris[3]
[1]Department of Biomedical Engineering, Yale University, New Haven, CT, [2]Department of Diagnostic Radiology, Yale University, New Haven, CT, [3]Department of Diagnostic Radiology; Department of Biomedical Engineering, Yale University, New Haven, CT

640 Increased Intra-Slice Functional Correlation: Problem and Solution
Alexandre Franco[1], Jaemin Shin[2], Ki Sueng Choi[2], Richard Craddock[3], Helen Mayberg[4], Xiaoping Hu[2]
[1]Emory University, Atlanta, GA, [2]Emory University/Georgia Tech, Atlanta, GA, [3]Baylor College of Medicine, Atlanta, United States, [4]Emory University, Atlanta, United States

641 Influence of acquisition parameters and paradigm type on slice timing correction efficiency
Ronald Sladky[1], Ross Cunnington[2], Ewald Moser[1], Christian Windischberger[1]
[1]MR Centre Of Excellence, Medical University Of Vienna, Vienna, Austria, [2]Queensland Brain Institute, University Of Queensland, St Lucia, Australia

642 Adaptation of Nonlocal Means to fMRI. Initial results
Juan J Lull[1], Jose Manjon[1], Luis Martí-Bonmatí[2], Gracián Garcia-Martí[2], Julio Sanjuan[3], Nuria Lull[4], María de la Iglesia-Vayá[5], Montse Robles[1]
[1]IBIME Research Group. Universidad Politécnica de Valencia, Valencia, Spain, [2]Hospital Quirón Valencia, Valencia, Spain, [3]Psychiatrich Unit. Faculty of Medicine. Clinical Hospital, University of Valencia, Valencia, Spain, [4]CEU-UCH Universidad Cardenal Herrera, Valencia, Spain, [5]Centro de Excelencia de Imagen Biomédica (CEIB) Consellería de Sanitat, Valencia, Spain

643 The Influence of skull stripping on the localisation of speech – when normalising lesioned brains
Florian Fischmeister[1,2], Katharina Merksa[1,2], Ilse Höllinger[1,2], Nikolaus Klinger[1,2], Alexander Geissler[1,2], Moritz Wurnig[1,2], Jakob Rath[1,2], Simon Robinson[3,2], Siegfried Trattnig[3,2], Roland Beisteiner[1,2]
[1]Study Group Clinical fMRI, Department of Neurology, Medical University of Vienna, Vienna, Austria, [2]MR Center of Excellence, Medical University of Vienna, Vienna, Austria, [3]Department of Radiology, Medical University of Vienna, Vienna, Austria

644 MRI Denoising based on Sparseness and Self-Similarity
Jose Manjon[1], Antonio Buades[2], Louis Collins[3], Pierrick Coupe[3], Montse Robles[4]
[1]IBIME Research Group. Universidad Politecnica de Valencia, Valencia, Spain, [2]Université Paris Descartes, Paris, France, [3]McConnell Brain Imaging Centre, Montreal, Canada, [4]IBIME Research Group. Universidad Politécnica de Valencia, Valencia, Spain

645 Rapid Motions in Pediatric and Clinical Populations
Paul Mazaika[1], Gary Glover[2], Allan Reiss[3]
[1]Stanford University, Stanford, CA, United States, [2]Stanford University, Stanford, United States, [3]Stanford Univ School Of Medicine Dept Of Psyc & Behavioral, Stanford, United States

Modeling and Analysis Methods

Multivariate Modeling

646 ** **Gaussian processes for whole-brain feature selection and classification in fMRI**
Ekaterina Lomakina[1,2], Kay Brodersen[1,2], Timothy Behrens[3], Joachim Buhmann[1], Klaas Enno Stephan[2,4]
[1]ETH Zurich, Zurich, Switzerland, [2]University of Zurich, Zurich, Switzerland, [3]Oxford Centre for Functional MRI of the Brain (FMRIB), Oxford, United Kingdom, [4]University College, London, United Kingdom

647 Group information guided ICA for analysis of multi-subject fMRI data**
Yuhui Du[1,2], Yong Fan[3]
[1]National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing,China, [2]College of Information and Communication Engineering, North University of China, Taiyuan, China, [3]National Laboratory Of Pattern Recognition, Institute Of Automation, Chinese Academy of Sciences, Beijing, China

648 Multivariate cortical shape modeling based on sparse representation
Seongho Seo[1], Moo K. Chung[1,2], Kim M. Dalton[2], Richard J. Davidson[2]
[1]Seoul National University, Seoul, Korea, [2]University of Wisconsin, Madison, WI

649 The 3dsvm plugin for AFNI now enables support vector machine-based real-time fMRI
Jonathan Lisinski[1], Ziad S. Saad[2], Richard Reynolds[2], Jason White[3], Stephen LaConte[1]
[1]Virginia Tech Carilion Research Institute, Roanoke, VA, [2]Scientific and Statistical Computing Core, National Institute of Mental Health, NIH, Bethesda, MD, [3]Baylor College of Medicine, Houston, TX

650 Multivariate neuroimaging substrates for five cognitive domains in aging and focal neurodegeneration
Brian Avants[1], Philip Cook[2], David Libon[3], Corey McMillan[2], James Gee[2], Murray Grossman[2]
[1]University of Pennsylvania, Philadelphia, United States, [2]University of Pennsylvania, Philadelphia, PA, [3]Drexel University, Philadelphia, PA

651 Structural Adaptive Smoothing Methods for fMRI and its Implementation in R
Karsten Tabelow[1], Henning Voss[2], Joerg Polzehl[1]
[1]WIAS, Berlin, Germany, [2]Citigroup Biomedical Imaging Center, Weill Cornell Medical College, New York City, NY

652 Validating Divergence as a Tool for Assessment of Group Differences in a JICA Fusion Framework
Rogers Silva[1,2], Vince Calhoun[1,2]
[1]Mind Research Network, Albuquerque, United States, [2]Electrical & Computer Engineering Department at UNM, Albuquerque, United States

653 A Multi-subject Parallel ICA Method for Simultaneous EEG-fMRI Resting Data Analysis
Lei Wu[1,2], Tom Eichele[3], Vince Calhoun[1,2]
[1]The Mind Research Network, Albuquerque, NM, USA, [2]Dept. of ECE, University of New Mexico, Albuquerque, NM, USA, [3]University of Bergen, Bergen, Norway

654 A Comparison of PLS and NPAIRS Analysis Approaches in a fMRI Virtual Reality Experiment
Ryan Cassidy[1,2], Richard Mraz[3], Stephen Strother[1,4,5], Simon Graham[1,3,4,6]
[1]Rotman Research Institute, Toronto, Canada, [2]Institute for Biomaterials and Biomedical Engineering, University of Toronto, Toronto, Canada, [3]Sunnybrook Research Institute, Toronto, Canada, [4]Department of Medical Biophysics, University of Toronto, Toronto, Canada, [5]Institute of Medical Science, University of Toronto, Toronto, Canada, [6]Heart and Stroke Foundation of Ontario Centre for Stroke Recovery, Toronto, Canada

655 Progression of Brain Atrophy in Preclinical Huntington's Disease: Ordinal Trend Analysis of MRI Data
Yilong Ma[1], Shichun Peng[1], Christian Habeck[2], Peter Kingsley[1], Andrew Feigin[1], David Eidelberg[1]
[1]Feinstein Institute for Medical Research, Manhasset, NY, [2]Columbia University, New York, NY

656 Neuroparser: Open-source software for fitting sparse structured models to large neuroimaging data
Logan Grosenick[1], Bradley Klingenberg[2], Genevera Allen[3], Jonathan Taylor[4]
[1]Stanford University, Stanford, United States, [2]Stanford, [3]Baylor College of Medicine, Houston, TX, [4]Stanford University, Stanford, CA

657 A simulation toolbox for fMRI data: simtb
Erik Erhardt[1], Yonghua Wei[2], Elena Allen[3], Tom Eichele[4], Vince Calhoun[5]
[1]The MIND Research Network, Albuquerque, United States, [2]University of New Mexico, Albuquerque, NM, [3]Mind Research Network, Albuquerque, United States, [4]University of Bergen, Bergen, Norway, [5]The Mind Research Network, Albuquerque, United States

658 The classification of motor imagery and motor intention using multivariate pattern analysis
Dongha Lee[1], Joong Il Kim[1], Hae-Jeong Park[1,2]
[1]Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Radiology and Division of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of

659 Estimating BrainMap-based ICA dimensionality using cluster-based models
Kimberly Ray[1], P Mickle Fox[2], Reese McKay[3], Peter Fox[4], Angela R. Laird[5], Stephen Smith[6], Christian Beckmann[7]
[1]Research Imaging Institute, University of Texas Health Science Center at San Antonio, San Antonio, Tx, [2]Research Imaging Center, University of Texas Health Science Center at San Antonio, San Antonio, TX, [3]Research Imaging Institute, United States, [4]University Of Texas Health Science Center At San Antonio, San Antonio, United States, [5]Research Imaging Institute, University of Texas Health Science Center at San Antonio, San Antonio, TX, [6]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [7]University of Oxford, Oxford, United Kingdom

660 Perception and Covert Production of Song and Speech: New Findings using Multi-Voxel Pattern Analysis
Dirk Goldhahn[1], Daniel Callan[2], Johannes Stelzer[1], Gabriele Lohmann[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]ATR Computational Neuroscience Laboratories, Kyoto, Japan

661 Kernel methods in fMRI
Mariléa Gomes-Vilela[1], Vanessa Gómez Verdejo[1], Antonio Oliviero[2], Stefan Posse[3], Manel Martinez-Ramon[1]
[1]Universidad Carlos III de Madrid, Leganés, Madrid, Spain, [2]FENNSI Group, Hospital Nacional de Parapléjicos de Toledo, Toledo, Spain, [3]University of New Mexico School of Medicine, Dept. of Neurology, Albuquerque, United States

662 Whole-Brain Spatio-Temporal Dimension Reduction via Sparse Generalized PCA
Genevera Allen[1,2], Logan Grosenick[3], Jonathan Taylor[3]
[1]Baylor College of Medicine, Houston, TX, [2]Rice University, Houston, TX, [3]Stanford University, Stanford, CA

663 A Toolbox for Representational Similarity Analysis
Hamed Nili[1], Cai Wingfield[2], Li Su[3], Nikolaus Kriegeskorte[4]
[1]MRC CBSU, [2]University of Bath, Bath, United Kingdom, [3]MRC's Cognition And Brain Sciences Unit, United Kingdom, [4]MRC CBSU, Cambrige, United Kingdom

664 Artifacts and Spatial Dominance Constraints using Canonical Correlation Analysis in Functional MRI
Dietmar Cordes[1], Mingwu Jin[2], Tim Curran[3], Rajesh Nandy[4]
[1]University Of Colorado-Denver, Aurora, United States, [2]University of Colorado-Denver, Aurora, United States, [3]University of Colorado-Boulder, Boulder, United States, [4]UCLA, Los Angeles, United States

665 Development of the Complex General Linear Model to fMRI - from Single Subject to Group Analysis
Daniel Rio[1], Jodi Gilman[2], Robert Rawlings[3], Lawrence Woltz[4], Daniel Hommer[5]
[1]NIH, Betheda, United States, [2]NIH, Bethesda, MD, [3]NIH retired, Bethesda, MD, [4]NIH consultant, Bethesda, MD, [5]NIAAA/NIH, Bethesda, United States

666 Prediction of fMRI data using fMRI data: Full-brain auto-regressive modeling
Rahul Garg[1], Guillermo Cecchi[1], Ravishankar Rao[1]
[1]IBM T. J. Watson Research Center, Yorktown Heights, NY

667 Machine learning for fMRI in Python: inverse inference with scikit-learn
Gael Varoquaux[1], Vincent Michel[2], Fabian Pedregosa[2], Alexandre Gramfort[3], Bertrand Thirion[4]
[1]INSERM/Neurospin, Gif-sur-Yvette, France, [2]INRIA/Neurospin, Gif sur Yvette, France, [3]INRIA - CEA Neurospin, France, [4]INRIA Futurs, Orsay, France

668 Smoothed sandwich to replace MFX in longitudinal fMRI
Thomas Nichols[1], Lourens Waldorp[2]
[1]University of Warwick, Dept. of Statistics, Coventry, United Kingdom, [2]University of Amsterdam, Amsterdam, Netherlands

Modeling and Analysis Methods

PET Modeling and Analysis

669* Persistent Network Homology from the Perspective of Dendrograms, (O-Th2)
Hyekyoung Lee[1], Moo K. Chung[2,1], Hyejin Kang[1], Boong-Nyun Kim[1], Dong Soo Lee[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]University of Wisconsin, Madison, WI

670 Brain network from sparse and topological point of view
Hyekyoung Lee[1], Moo K. Chung[2,1], Hyejin Kang[1], Boong-Nyun Kim[1], Dong Soo Lee[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]University of Wisconsin, Madison, WI

Modeling and Analysis Methods

Segmentation and Parcellation

671 Whole brain tractography-based parcellation reveals functionally segregated regions
Saad Jbabdi[1], Stephen Smith[1], Timothy Behrens[1]
[1]FMRIB Centre, University of Oxford, Oxford, United Kingdom

672 A Method to Identify Brain Clusters with Different Structure-Function Correlation between Two Groups
Andrew Michael[1], Margaret King[1], Vince Calhoun[1,2,3]
[1]The Mind Research Network, Albuquerque, USA, [2]Dept. of ECE, University of New Mexico, Albuquerque, USA, [3]School of Medicine, Yale University, New Haven, USA

673 Effect of non-local means denoising on cortical segmentation accuracy with FACE
Simon Eskildsen[1,2], Pierrick Coupe[1], Vladimir Fonov[1], Lasse Østergaard[2], D. Louis Collins[1]
[1]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Canada, [2]Department of Health Science and Technology, Aalborg University, Aalborg, Denmark

674 Toward an Automatic Cerebellar Parcellation Method Robust to Anatomical Variation
John Bogovic[1], Pierre-Louis Bazin[1], Jerry Prince[1], Sarah Ying[1]
[1]Johns Hopkins University, Baltimore, MD

675 Partitioning of the brain using graph-cut
Robert Dahnke[1], Rachel Yotter[1], Christian Gaser[1]
[1]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Jena, Germany

676 Improved multi-atlas based segmentation of subcortical structures using exhaustive registration
M. Mallar Chakravarty[1], Rebecca Calcott[1], D. Louis Collins[2], Jason Lerch[1]
[1]Mouse Imaging Centre, The Hospital for Sick Children, Toronto, Ontario, [2]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Canada

677 Cortex Parcellation And Connectivity Data Simulation for a group of subjects
Pauline Roca[1], Denis Rivière[2], Alan Tucholka[3], jean-francois mangin[4]
[1]Neurospin, CEA, Paris, France, [2]NeuroSpin, CEA, Orsay, France, [3]INRIA Saclay, PARIETAL, Paris, France, [4]Neurospin, CEA, Gif sur Yvette, France

678 Improved segmentation with high-resolution 3D MR images in MS
Sushmita Datta[1], Xiaojun Sun[1], Karan Shukla[1], Ponnada Narayana[1]
[1]The University of Texas Health Science Center at Houston, Houston, United States

679 Accounting for changes in data and labeling protocol: improving atlas-based hippocampal segmentation
Courtney Bishop[1], Dorit Merhof[2], Jerome Declerck[3], Mark Jenkinson[4], the Alzheimer's Disease Neuroimaging Initiative (ADNI)[5]
[1]FMRIB Centre, University Of Oxford, Oxford, United Kingdom, [2]University of Konstanz, Konstanz, Germany, [3]Siemens Molecular Imaging, Oxford, United Kingdom, [4]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [5]NIA ADEAR Center, Bathesda, MD

680 Fully Automated Pipeline for Quantification and Localization of White Matter Hyperintensity
Seun Jeon[1], Uicheul Yoon[2], Jun Sung Park[1], Sang Won Seo[3], Jung-Hyun Kim[4], Sun I. Kim[1], Duk L. Na[3], Jong-Min Lee[1]
[1]Hanyang University, Seoul, Korea, Republic of, [2]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [3]Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of, [4]Sungkyunkwan University School of Medicine, Seoul, Seoul, Korea, Republic of

681 Automatical segmentation of hippocampus based on tissue segmented image and elder group template
Dong-Kyun Lee[1], Uicheul Yoon[2], Hak Young Rhee[3], Sun I. Kim[2], Geon-Ho Jahng[4], Jong Min Lee[2]
[1]Department of Biomedical Engineering, Hanyang University, Seoul, Republic Of Korea, [2]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [3]Department of Neurology, Kyung Hee University Hospital at Gangdong, Seoul, Korea, Republic of, [4]Department of Radiology, Kyung Hee University, Seoul, Korea, Republic of

682 Gender Differences in the Cytoarchitectural Parcellation of Human Corpus Callosum
Yi-Ping Chao[1,2], En-Chi Tsui[1], Wei-Hsun Yeh[1], Yu-Ting Chen[1], Ching-Po Lin[3]
[1]School of Applied Information Sciences, Chung Shan Medical University, Taichung, Taiwan, Republic of China, [2]Department of Medical Imaging, Chung Shan Medical University Hospital, Taichung, Taiwan, Republic of China, [3]Institute of Neuroscience, National Yang Ming University, Taipei, Taiwan, Republic Of China

683 Withdrawn

684 Automatic segmentation of ex-vivo MRI images using CVS in FreeSurfer
Lilla Zollei[1], Bruce Fischl[2]
[1]MGH, Boston, United States, [2]Harvard Medical School and Massachusetts General Hospital, Boston, United States

685 Segmenting area V5/MT using resting-state correlations
Bruce Fischl[1,2,3], Jonathan Polimeni[1,2]
[1]A. A. Martinos Center for Biomedical Imaging, Harvard Medical School, Massachusetts General Hospital, Charlestown, MA, United States, [2]Harvard Medical School, Boston, MA, United States, [3]CSAIL, Massachusetts Institute of Technology, Cambridge, MA, United States

686 An Interactive Sulcal Fundi Editor in Brainvisa
Arnaud Le Troter[1], Denis Rivière[2], Olivier Coulon[1]
[1]LSIS Laboratory, CNRS, Marseille, France, [2]NeuroSpin, CEA, Gif/Yvette, France

687 Fully automatic hippocampus segmentation using graph cuts
Ki-Chang Kwak[1], Uicheul Yoon[1], Dong-Kyun Lee[1], Hackjoon Shim[2], Sang Won Seo[3], Sun I. Kim[1], Duk L. Na[3], Jong-Min Lee[1]
[1]Department of Biomedical Engineering, Hanyang University, Seoul, South Korea, [2]School of Electrical Engineering, BK21 Research Division for IT, ASRI, Seoul National University, Seoul, South Korea, [3]Department of Nerology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea

688 Automated Measurement of the Ventricular Dilation Metric Evans' Index
Nazahah Mustafa[1], Trevor Ahearn[1], Asha Neelakantan[2], Gordon Waiter[3], Sima Salarirad[3], Alison Murray[1]
[1]Aberdeen Biomedical Imaging Centre, Aberdeen, United Kingdom, [2]Aberdeen Royal Infirmary, Aberdeen, United Kingdom, [3]University of Aberdeen, Aberdeen, United Kingdom

689 Fully automated segmentation of corpus callosum from diffusion tensor and MRI 3D-T1 weighted images
Eloy Martinez-de-las-Heras[1], Sara Llufriu[2], Robinson Sandoval[3], Alberto Prats-Galino[4], Iñigo Gabilondo[2], Yolanda Blanco[5], Nuria Bargallo[6], Francesc Graus[5], Albert Saiz[5], Carles Falcon[7]
[1]Neuroimmunology group. Fundacio Clinic. Laboratori Analisi per la Imatge - IDIBAPS, Barcelona, Spain, [2]Neuroimmunology group. Hospital Clinic Barcelona. IDIBAPS, Barcelona, Spain, [3]Unitat Analisi per la Imatge. Laboratori Analisi per la Imatge - IDIBAPS, Barcelona, Spain, [4]Laboratory of Surgical NeuroAnatomy (LSNA). Facultat de Medicina. Universitat de Barcelona, Barcelona, Spain, [5]Neuroimmunology Group. Neurology Service. Hospital Clinic Barcelona, Barcelona, Spain, [6]Neuroradiology Unit. Imaging Diagnostic Center. Hospital Clinic Barcelona. IDIBAPS, Barcelona, Spain, [7]Unitat Analisi per la Imatge. Laboratori Analisi per la Imatge. IDIBAPS, Barcelona, Spain

690 Validation Tools for Cortical Reconstruction Algorithms
Navid Shiee[1], Jennifer Cuzzocreo[1], Bhaskar Kishore[1], Christopher Walling[2], Pierre-Louis Bazin[3], Jerry Prince[1], Dzung Pham[1,2]
[1]Johns Hopkins University, Baltimore, MD, [2]Center for Neuroscience and Regenerative Medicine, Bethesda, MD, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

691 Tools to study development, aging and genetics of intersubject variability in cortical morphology
Peter Kochunov[1], William Rogers[1], Jack Lancaster[1], olivier coulon[2], jean-francois mangin[2]
[1]The University of Texas Health Science Center at San Antonio, San Antonio, United States, [2]Neurospin, CEA, Gif sur Yvette, France

692 Fully Automated White Matter Hyperintensity Segmentation without FLAIR
Jordan Muraskin[1], Frank Provenzano[2], Adam Brickman[2]
[1]Columbia University, New York,USA, [2]Columbia University, New York, NY

693 Effect of motion artifacts on MRI segmentation accuracy
Alan Barnett[1], Beth Verchinski[1], Herve Lemaitre[2], Venkata Mattay[3]
[1]National Institute of Mental Health, Clinical Brain Disorders Branch, Bethesda, MD, [2]INSERM - CEA - Faculté de Médecine Paris Sud 11, Orsay, France, [3]National Institute of Mental Health, National Institutes of Health, Bethesda, MD

694 Segmentation Priors From Texture Features Without Population-Based Templates or Registration
Ziad Saad[1], Andrej Vovk[2], Dusan Suput[2], Janez Stare[3], Robert Cox[1]
[1]Scientific and Statistical Computing Core, National Institute of Mental Health, NIH, Bethesda, MD, [2]Institute of Pathophysiology, University of Ljubljana, Ljubljana, Slovenia, [3]Institute for Biostatistics and Medical Informatics, University of Ljubljana, Ljubljana, Slovenia

695 ADisc – a pipeline for Adaptive Disconnection based brain hemisphere segmentation in 3D MRI
Lu Zhao[1], Jussi Tohka[2]
[1]Montreal Neurological Institute, Montreal, Canada, [2]Tampere University of Technology, Tampere, Finland

696 Geometrical modelling of the human hippocampus
Jan De Munck[1], Hugo Vrenken[2], Ronald van Schijndel[3], Anneke Van der Reijden[3], Henk Huisman[3], Theo Faes[3], Frederik Barkhof[4]
[1]Amsterdam, Netherlands, [2]VU University Medical Center, [3]VU University Medical Center, Amsterdam, Netherlands, [4]VU Medical Centre, Amsterdam, Netherlands

697 Individual brain parcellation based on single subject ICA
Erik van Oort[1], David Norris[1]
[1]Radboud University Nijmegen, Donders Institute For Brain, Cognition And Behaviour, Nijmegen, Netherlands

698 Parcellation of the lateral frontal cortex from resting state fMRI
ALEXANDROS GOULAS[1], Peter Stiers[1]
[1]Maastricht University, Maastricht, Netherlands

699 Changes in body fat percentage assessed by automatic whole body MRI analysis
Jan Kassubek[1], Denise Kehle[1], Alexander Unrath[1], Albert Ludolph[1], Heiko Neumann[1], Hans-Peter Müller[1]
[1]University of Ulm, Ulm, Germany

Modeling and Analysis Methods

Task-Independent and Resting-State Analysis

700 ** **Rehabilitation in Chronic Stroke Normalizes Motor System Resting State Connectivity**
George Wittenberg[1,2], Lauren Jones-Lush[2], Albert Lo[3,4], Lorie Richards[5,6], Steven Roys[2], Rao Gullapalli[7]
[1]VA Maryland Health Care System, Baltimore, MD, [2]University of Maryland, Baltimore, MD, [3]Providence Veterans Affairs Medical Center, Providence, RI, [4]Brown University, Providence, RI, [5]Malcom Randall Veterans Administration Medical Center, Gainesville, FL, [6]University of Florida, Gainesville, FL, [7]University Of Maryland, Baltimore, United States

701 Functional and structural connectivity markers for tinnitus cortical stimulation therapy
Rey Ramírez[1], Gang Chen[2], Wolfgang Gaggl[2,3], David Friedland[4], Christopher Butson[1,5], Shi-Jiang Li[2,6], Sylvain Baillet[1,2], Brian Kopell[5]
[1]Department of Neurology, Medical College of Wisconsin, Milwaukee, United States, [2]Department of Biophysics, Medical College of Wisconsin, Milwaukee, United States, [3]Department of Radiology, Medical College of Wisconsin, Milwaukee, United States, [4]Department of Otolaryngology and Communication Sciences, Medical College of Wisconsin, Milwaukee, United States, [5]Department of Neurosurgery, Medical College of Wisconsin, Milwaukee, United States, [6]Department of Psychiatry and Behavioral Medicine, Medical College of Wisconsin, Milwaukee, WI

702 Combined fMRI/EEG to map non-genomic effects of exogeneous cortisol**
Sara Kiem[1], Katia Andrade[1], Roberto Goya-Maldonado[1], Höhn David[1], Victor Spoormaker[1], Torsten Klengel[1], Florian Holsboer[1], Michael Czisch[1], Philipp Sämann[1]
[1]Max Planck Institute of Psychiatry, Munich, Germany

703 S-club Distance - Quantifying Separation of Functional Brain Networks
Alexander Schäfer[1], Daniel Margulies[1], Arno Villringer[1], Gabriele Lohmann[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

704 Resting State Network Study of Quantitative Perfusion Fluctuations
Jingyi Xie[1], Peter Jezzard[1], Thomas Okell[1], Karla Miller[1], Michael Chappell[1], Stephen Smith[1]
[1]Nuffield Department of Clinical Neurosciences (FMRIB Centre), University of Oxford, Oxford, United Kingdom

705 Network centrality and information flow in the human brain functional connectome
Xi-Nian Zuo[1,2], Ross Ehmke[3], Maarten Mennes[4], Davide Imperati[4], F. Xavier Castellanos[2], Olaf Sporns[3], Michael Milham[4]
[1]Institute of Psychology, Chinese Academy of Sciences, Beijing, Beijing, [2]Institute for Pediatric Neuronscience at NYU Langone Medical Center, New York, NY, [3]Indiana University, Bloomington, IN, [4]Institute for Pediatric Neuroscience at NYU Langone Medical Center, New York, NY

706 Analysis of spontaneous EEG/MEG by ICA of time-frequency tensor
Aapo Hyvarinen[1]
[1]University of Helsinki, Finland

707 Intrinsic connectivity within and between the default, attention and control networks of the brain
R. Nathan Spreng[1], Jorge Sepulcre[2], Daniel Schacter[1]
[1]Department of Psychology, Harvard University, Cambridge, MA, [2]Howard Hughes Medical Institute, Harvard University, Cambridge, MA

708 Relating spontaneous BOLD oscillatory power scale to brain functional and structural organization
Ali Mansour[1], Marwan Baliki[1], Alex Baria[1], Leijan Huang[1], Vania Apkarian[1]
[1]Northwestern University, Chicago, IL

709 Quantifying Contralateral Resting-State Homology Across the Whole Cortex
Hang Joon Jo[1], Ziad S. Saad[1], Steve Gotts[2], Daniel Glen[1], Alex Martin[2], Robert Cox[1]
[1]Scientific and Statistical Computing Core, National Institute of Mental Health, NIH, Bethesda, MD, [2]Laboratory of Brain and Cognition, National Institute of Mental Health, NIH, Bethesda, MD

710 SWI and resting-state fMRI can give a better inference about functional activation cortical maps?
Marta Maieron[1], Barbara Tomasino[2], Serena D'Agostini[3], Renato Padovani[4], Miran Skrap[5]
[1]Department of Medical Physics AOU SMM Udine, UDINE, Italy, [2]IRCCS Medea: Nostra Famiglia, Pasian di Prato, Udine, Udine, Italy, [3]Department of Neuroradiology AOU SMM Udine, udine, Italy, [4]Department of Medical Physics AOU SMM Udine, Udine, Italy, [5]Department of Neurosurgery AOU SMM Udine, Udine, Italy

711 Functional parcellation of the motor cortex: Children with autism vs. typically developing children
Mary Beth Nebel[1,2], Suresh Joel[1,2], John Muschelli[3], Anita Barber[1,2], Brian Caffo[3], James Pekar[1,2], Stewart Mostofsky[1,2]
[1]Johns Hopkins University School of Medicine, Baltimore, MD, [2]Kennedy Krieger Institute, Baltimore, MD, [3]Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

712 Focal Pontine Lesions Provide Evidence That Functional Connectivity Depends on Anatomic Connectivity
Jie Lu[1,2], Hesheng Liu[2], Miao Zhang[1], Danhong Wang[2], Yanxiang Cao[1], Qingfeng Ma[1], Dongdong Rong[1], Xiaoyi Wang[1], Randy Buckner[3,2,4], Kuncheng Li[5]
[1]Xuanwu Hospital of Capital Medical University, Beijing, China, [2]Massachusetts General Hospital, Charlestown, MA, [3]Harvard University, Department of Psychology and Center for Brain Science, Cambridge, MA, [4]HHMI, Cambridge, MA, [5]Department of Radiology, Xuanwu Hospital of Capital Medical University, Beijing, China, Beijing, China

713 Caffeine Increases the Temporal Variability of Resting-State Functional Connectivity
Anna Leigh Rack-Gomer[1], Thomas Liu[1]
[1]UCSD Center for Functional MRI, La Jolla, CA

714 Revealing the architecture of the human brain neural network with connected iterative scan
Xiaodan Yan[1], Stephen Kelley[1], Mark Goldberg[1]
[1]Rensselaer Polytechnic Institute, Troy, United States

715 Spontaneous fMRI activity reflects a dynamic image of brain state
Marta Bianciardi[1], Masaki Fukunaga[1], Jacco de Zwart[1], Jeff Duyn[1]
[1]Advanced MRI Section, LFMI, NINDS, National Institutes of Health, Bethesda, MD, United States

716 Time-frequency investigation of fMRI resting state networks with the use of wavelet coherence
Janine Bijsterbosch[1], Kwang-Hyuk Lee[1], Michael Hunter[1], Iain Wilkinson[2], Peter Woodruff[1]
[1]ScanLab, Academic Clinical Psychiatry, University of Sheffield, Sheffield, United Kingdom, [2]Academic Unit of Radiology, University of Sheffield, United Kingdom, Sheffield, United Kingdom

717 Relation Between Cerebral Blood Flow and Resting State Connectivity Under Pharmacological Conditions
Najmeh Khalili Mahani[1,2], Matthias J. P. van Osch[1], Christian F Beckmann[3], Joop Van Gerven[4,1], Serge Rombouts[1,2]
[1]Leiden University Medical Center, Leiden, Netherlands, [2]Leiden Institute for Brain and Cognition, Leiden, Netherlands, [3]University Of Oxford, Oxford, United Kingdom, [4]Center for Human Drug Research, Leiden University Medical Center, Leiden, Netherlands

718 Networks correlated to beta-band activity at rest in sensorimotor cortex using icEEG-fMRI
David Carmichael[1], Serge Vulliemoz[1,2], Roman Rodionov[1], Matthew Walker[1], Karin Rosenkranz[1], Andrew McEvoy[3], Louis Lemieux[1]
[1]UCL Institute of Neurology, London, United Kingdom, [2]University of Geneva, Geneva, Switzerland, [3]National Hospital for Neurology and Neurosurgery, London, United Kingdom

719 Periods of rest in fMRI contain transient events which are related to slow spontaneous fluctuations
Natalia Petridou[1,2], Cesar Caballero Gaudes[3,2], Ian Dryden[4], Susan Francis[2], Penny Gowland[2]
[1]Rudolf Mangus Institute / Radiology, UMC Utrecht, Utrecht, Netherlands, [2]SPMMRC, University of Nottingham, Nottingham, United Kingdom, [3]CIBM - HUG - UNIGE, Geneve, Switzerland, [4]Department of Statistics, University of South Carolina, Columbia, United States

720 Spectral centroid and spectral median as new tools for analyzing fMRI data
Gabriele Lohmann[1], Dirk Goldhahn[1], Daniel Margulies[2], Annette Horstmann[3], Burkhard Pleger[4], Joeran Lepsien[1], Haiko Schloegl[5], Michael Stumvoll[6], Arno Villringer[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Berlin School of Mind and Brain, Humboldt University, Berlin , Germany, [3]MPI for Human Cognitive and Brain Sciences, Leipzig, Germany, [4]Max-Planck-Institute for Human Cognitive and Brain Science, Leipzig, Germany, [5]Department of Medicine, University of Leipzig, Leipzig, Germany, [6]IFB Adiposity Diseases, University of Leipzig, Leipzig, Germany

721 Hypothalamic functional connectivity in Polycystic Ovary Syndrome versus obese and lean controls
Matthew Schroeder[1], Lei Wang[1], John Csernansky[2], Andrea Dunaif[2]
[1]Northwestern University Feinberg School of Medicine Department of Psychiatry and Behavioral Sciences, Chicago, United States, [2]Northwestern University Feinberg School of Medicine, Chicago, United States

722 Functional Network Stability
Suresh Joel[1,2], Craig Jones[1,2], Brian Caffo[1], Peter van Zijl[1,2], James Pekar[1,2]
[1]Johns Hopkins University, Baltimore, United States, [2]Kennedy Krieger Institute, Baltimore, United States

723 Criticality in the resting brain: an MEG study
Oren Shriki[1], Sreenivasan Nadar[1], Frederick Carver[1], Tom Holroyd[1], Richard Coppola[1], Dietmar Plenz[1]
[1]National Institute of Mental Health, Bethesda, MD, United States

724 Time-Frequency Dynamics of Resting State Effective Connectivity in the Default Mode Network
Gopikrishna Deshpande[1,2], Zhihao Li[3], Xiaoping Hu[3]
[1]AU MRI Research Center, Department of Electrical and Computer Engineering, Auburn University, Auburn, AL, United States, [2]Department of Psychology, Auburn University, Auburn, AL, United States, [3]Coulter Department of Biomedical Engineering, Georgia Institute of Technology and Emory University, Atlanta, GA, United States

725 Rethinking SNR for Resting-State fMRI Quality Control
David Gutman[1], Maarten Mennes[2], Stan Colcombe[3], Clare Kelly[2], Xi-Nian Zuo[4], F Xavier Castellanos[5,6], Michael Milham[7,6]
[1]New York University School of Medicine, New York, NY, [2]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, United States, [3]Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY, [4]Institute of Psychology, Chinese Academy of Sciences, Beijing, Beijing, [5]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, [6]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY, [7]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, N, New York, NY

726 Intrinsic functional organization of the Default-Mode network revealed by spatial ICA
Vincent Perlbarg[1], Salma Mesmoudi[1], Mélanie Pélégrini-Issac[1], Habib Benali[1,2]
[1]INSERM / UPMC Univ. Paris 06, UMR_S678, LIF, Paris, France, [2]Université de Montréal, MIC/UNF, Montréal, Canada

727 Functional Normalization through ICA (ICA-fNORM) with Intrinsic Networks as Functional Templates
Siddharth Khullar[1,2], Andrew Michael[1], Nathan Cahill[2], Stefi Baum[2], Vince Calhoun[1,2]
[1]Mind Research Network, Albuquerque, NM, [2]Rochester Institute of Technology, Rochester, NY

728 Functional MRI time series fractality changes in MCI and AD patients
Alle Meije Wink[1], Frederik Barkhof[1], Maja Binnewijzend[1]
[1]VU Medical Centre, Amsterdam, Netherlands

729 Resting state frequency domain Tomographic ICA
Maria L Bringas[1], Ivonne Pedroso[1], Vanessa Perez-Bocourt[2], Valia Rodriguez[3], Jose Sanchez-Bornot[4], Pedro Valdes-Sosa[3]
[1]International Center for Neurological Restoration CIREN, Havana, Cuba, [2]Faculty of Psychology, University of Havana, Havana, Cuba, [3]Cuban Neuroscience Center, Havana, Cuba, [4]Institute of Cybernetics, Mathematics and Physics, Havana, Cuba

730 Regional Homogeneity of Resting State fMRI Signals Predicts Stop Signal Task Performance
Lixia Tian[1], Juejing Ren[2], Yufeng Zang[2]
[1]Department of Biomedical Engineering, Beijing Jiaotong University, Beijing, China, [2]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

731 Neural Correlates of Inhibitory Control and Inconsistency in the Stop-signal task
Natan Vega Potler[1], Maarten Mennes[1], Michelle VanTieghem[1], Clare Kelly[1], Adriana Di Martino[1], F. Xavier Castellanos[1,2], Michael Milham[1,2]
[1]Phyllis Green and Randolph Cõwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, United States, [2]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY

732 Can PDE-based smoothing strategies bring improvements on resting state fMRI analyses?
Xiu-Xia Xing[1], Jonathan Adelstein[2], You-Long Zhou[3], Xi-Nian Zuo[4]
[1]College of Applied Sciences, Beijing University of Technology, Beijing, Beijing, [2]Institute for Pediatric Neuroscience at NYU Langone Medical Center, New York, NY, [3]Department of Acupuncture, Henan University of Traditional Chinese Medicine, Zhengzhou, Henan, [4]Institute of Psychology, Chinese Academy of Sciences, Beijing, Beijing

733 Sliding temporal window ICA reveals spatiotemporal variation of default mode network
Vesa Kiviniemi[1,2], Tapani Vire[3], Jukka Remes[3], Ahmed Abou Elseoud[3], Tuomo Starck[3], Osmo Tervonen[3], Juha Nikkinen[3]
[1]Diagnostic Radiology, Oulu,Finland, [2]Diagnostic Institute, Oulu, Finland, [3]Diagnostic Radiology, Oulu, Finland

734 Heavy Tailed Distributions in the Avalanche Statistics of MEG Signal
Jeff Alstott[1,2], Edward Bullmore[2], Dietmar Plenz[1]
[1]National Institute of Mental Health, Bethesda, United States, [2]University of Cambridge Brain Mapping Unit, Cambridge, United Kingdom

735 Resting State Networks in children with and without Autism
Peng You[1,2], Wayne Lee[2], Jin Fan[3], Latha Soorya[3], Ting Wang[3], Margot Taylor[1,2], Evdokia Anagnostou[1,3,4]
[1]University of Toronto, Toronto, Canada, [2]Hospital for Sick Children, Toronto, Canada, [3]Mount Sinai Medical Center, New York, United States, [4]Bloorview Research Institute, Toronto, Canada

736 The effects of flip angle on estimated fMRI functional connectivity
Daniel Handwerker[1], Javier Gonzalez-Castillo[1], Cambrie Starkel[1], Jerzy Bodurka[2], Peter Bandettini[1]
[1]Section on Functional Imaging Methods, NIMH / NIH / DHHS, Bethesda, MD, [2]Laureate Institute for Brain Research, Tulsa, OK

737 Intrinsic connectivity networks: Replication with extension to adolescent individual differences
Krista Wisner[1], Robert Krueger[1], Angus MacDonald[1]
[1]University of Minnesota, Twin Cities, Minneapolis, MN, USA

738 Measuring whole brain resting state correlations in high gamma frequency band with MEG
Daniel Rubinstein[1], Frederick Carver[1], Stephen Robinson[1], Tom Holroyd[1], Richard Coppola[1]
[1]NIMH, Bethesda, MD

739 Connectivity of resting state brain networks: time-of-day modulation
Janusch Blautzik[1], Isabella Peres[2], Céline Vetter[2], Evgeny Gutyrchik[3], Ernst Poeppel[4], Till Roenneberg[2], Maximilian Reiser[1], Thomas Meindl[1]
[1]Institute of Clinical Radiology, Ludwig Maximilian University, Munich, Germany, [2]Institute of Medical Psychology, Ludwig Maximilian University, Munich, Germany, [3]IMP / HWZ, Ludwig Maximilian University, Munich, Germany, [4]Human Science Center, Munich, Germany

740 Ultra-high field 7T resting state fMRI for preoperative localization of eloquent brain areas
Karsten Wrede[1,2], Stefan Maderwald[1], Philipp Damman[2], Christian Beckmann[3], Mark Ladd[1,4], Ulrich Sure[2], Thomas Gasser[2]
[1]Erwin L. Hahn Institute for Magnetic Resonance Imaging, Essen, Germany, [2]Department of Neurosurgery, University Hospital Essen, Essen, Germany, [3]Donders Centre for Cognitive Neuroimaging, Nijmegen, Netherlands, [4]Department of Diagnostic and Interventional Radiology and Neuroradiology, University Hospital Essen, Essen, Germany

741 Intersubject variability in default mode network masks reduced hippocampal recruitment in epilepsy
George Andrew James[1], Jeffrey Ojemann[2], Daniel Drane[3]
[1]University of Arkansas for Medical Sciences, Little Rock, AR, [2]University of Washington, Seattle, WA, [3]Emory University, Atlanta, GA

742 Inter-Subject Correlation Matrix Clustering in Naturalistic Stimulus fMRI
Jukka-Pekka Kauppi[1], Iiro Jääskeläinen[2], Mikko Sams[2], Jussi Tohka[1]
[1]Tampere University of Technology, Tampere, Finland, [2]Aalto University School of Science and Technology, Espoo, Finland

743 Intra-group variability of default-mode networks: Does a group-level statistic matter?
Yong-Hwan Kim[1], Jong-Hwan Lee[1]
[1]Dept. of Brain and Cognitive Engineering, Korea University, Seoul, Korea, Republic of

744 Investigating the Regional Rhythms of Resting Human Brain with Functional Magnetic Resonance Imaging
Lianghua He[1,2], Die Hu[3], Pengwei Wang[4], Zhishun Wang[5]
[1]Brian image lab, Columbia University, New York,NY, [2]Tongji University, Shanghai, China, [3]Fudan University, Shanghai, China, [4]Shandong University, Jinan, China, [5]Department of Psychiatry, Columbia University, New York, NY

745 Functional covariance networks revealed by across-subject amplitude of low-frequency fluctuations
Zhiqiang Zhang[1], Xi-Nian Zuo[2], Wei Liao[3], Zhengge Wang[1], Yuan Zhong[1], Lu Guangming[1], Yijun Liu[4]
[1]Department of Radiology, Jinling Hospital, Nanjing University School of Medicine, Nanjing, China, [2]Institute of Psychology, Chinese Academy of Sciences, Beijing, Beijing, [3]School of Life Science and Technology, University of Electronic Science and Technology of China, Chengdou, Sichuan, [4]Department of Psychiatry& Neuroscience, University of Florida, Gainesville, FL

746 Reproducible Differences between Eyes Open and Eyes Closed Resting States
Dongqiang Liu[1], Zhangye Dong[2], Jue Wang[1,2], Yufeng Zang[1,2]
[1]Center for Human Brain Research and Affiliated Hospital, Hangzhou Normal University, Hangzhou, China, [2]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

747 Males exhibit higher functional connectivity in the DMN during resting state activity
Gianluca Mingoia[1], kerstin Langbein[2], Maren Dietzek[2], Christian Gaser[3], Heinrich Sauer[2], Igor Nenadic[2]
[1]Department of Psychiatry, Friedrich-Schiller University of Jena, [2]Department of Psychiatry, Friedrich-Schiller University of Jena, Jena, Germany, [3]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Jena, Germany

748 Wavelet-based amplitude of low-frequency fluctuations (wALFF)
Ting Xu[1], Raymond Chan[1], Michael Milham[2], Yu-Feng Zang[3], Xi-Nian Zuo[1]
[1]Institute of Psychology, Chinese Academy of Sciences, Beijing, China, [2]Institute for Pediatric Neuroscience at NYU Langone Medical Center, New York, United States, [3]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

749 Resting State Analysis Sensitively and Specifically Identifies the Presence of Parkinson Disease
Frank Skidmore[1], Mark Yang[2], Lewis Baxter[2], Karen von Deneen[2], Joanna Collingwood[3], Guojun He[2], Dmitriy Korenkevych[2], Alex Savenkov[2], Keith White[2], Kenneth Heilman[2], Mark Gold[2], Yijun Liu[2]
[1]University of Florida, North Florida/South Georgia VA Medical Center, USA, [2]University of Florida, North Florida, USA, [3]Warwick University, Warwick, United Kingdom

750 Consistent BOLD Responses to Eyes Closing and Opening
Alexander Zhigalov[1], Pin-Yu Chen[2], Michelle Liou[1], Wen-Yih Isaac Tseng[2]
[1]Institute of Statistical Science, Academia Sinica, Taipei, Taiwan, Republic of China, [2]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China

751 The Default Mode Network and its Association with Empathy and Autistic Traits in Neurotypical Adults
Kaat Alaerts[1], Daniel Woolley[1], Evelien Nackaerts[1], Stephan Swinnen[2], Nicole Wenderoth[1]
[1]Katholieke Universiteit Leuven, Leuven, Belgium, [2]K.U.Leuven, Leuven, Belgium

752 Intelligence and the Resting Brain
Kenia Martínez[1], Ana Beatriz Solana[2], Miguel Burgaleta[1], Juan Antonio Hernández-Tamames[2,3,4], María Ángeles Quiroga[5], Juan Álvarez-Linera[2,4], Roberto Colom[1]
[1]Universidad Autónoma, Madrid, Spain, [2]Center for Biomedical Technology - UPM, Pozuelo de Alarcon, Spain, [3]Universidad Rey Juan Carlos, Mostoles, Spain, [4]Fundación CIEN-Fundación Reina Sofía, Madrid, Spain, [5]Universidad Complutense, Madrid, Spain

753 Intrinsic connectivity networks in Eyes Open vs. Eyes Closed EEG-fMRI
Lei Wu[1,2], Vince Calhoun[1,3], Tom Eichele[4,1]
[1]The Mind Research Network, Albuquerque, NM, USA, [2]Dept of ECE, University of New Mexico, Albuquerque, NM, USA, [3]Dept. of ECE, University of New Mexico, Albuquerque, NM, USA, [4]University of Bergen, Bergen, Norway

754 Diminished Resting-State Functional Connectivity In Lateral Occipital Cortex In Early HIV Infection
Paul Foryt[1,2], Xue Wang[1], Renee Ochs[1], Jae-Hoon Chung[1,2], Ying Wu[3], Todd Parrish[1], Ann Ragin[1]
[1]Radiology, Northwestern University, Chicago, IL, [2]Engineering, Northwestern University, Evanston, IL, [3]Radiology, NorthShore University Health System, Evanston, IL

755 Establishing Methodology for Resting State ROI Analysis to Distinguish Task Specific Motor Networks
William Sohn[1], Duk Na[2], Kwangsun Yoo[3], Yong Jeong[4]
[1]KAIST, Daejeon, [2]Samsung Medical Center, Seoul, Korea, Republic of, [3]KAIST, Daejeon, Korea, Republic of, [4]KAIST, Daejeon, Republic Of Korea

756 Resting state functional connectivity: influence of age, gender and Down syndrome
Wenqi Sun[1], Alexander Moiseev[2], Faisal Beg[1], Naznin Virji-Babul[3], Arif Babul[4], Farouk Nathoo[4]
[1]Simon Fraser University, Burnaby, B.C., [2]Down Syndrome Research Foundation, Burnaby, British Columbia, [3]University of British Columbia, Vancouver, B.C., [4]University of Victoria, Victoria, B.C.

757 Does the model matter in defining the default mode network?
Charisa Ng[1], Anita Oder[1], Omer Grigg[2], Karen Campbell[2], Stephen Strother[1], Cheryl Grady[1]
[1]Rotman Research Institute, Toronto, Ontario, [2]University of Toronto, Toronto, Ontario

758 Apathy and Depression Have Reliable Alterations in Resting Activity in Parkinson Disease
Frank Skidmore[1], Mark Yang[2], Lewis Baxter[2], Karen von Deneen[2], Joanna Collingwood[3], Guojun He[2], Rajiv Tandon[2], Dmitriy Korenkevych[2], Alex Savenkov[2], Kenneth Heilman[2], Mark Gold[2], Yijun Liu[2]
[1]University of Florida, North Florida/South Georgia VA Medical Center, USA, [2]University of Florida, North Florida, USA, [3]Warwick University, United Kingdom

759 The consistency of functional connectivity among independent component time courses at rest
Bum seok Jeong[1], Jeewook Choi[2], Ji-woong Kim[3]
[1]Eulji University Hospital, Daejeon, [2]Catholic University, Daejong St. Mary's Hospital, Daejeon, Korea, Republic of, [3]Konyang University Hospital, Daejeon, Korea, Republic of

Modeling and Analysis Methods

Univariate Modeling

760 HRF Model Selection in fMRI using Multiple-Model Kalman Filters
Paulo Rosa[1], Carlos Silvestre[1], Patrícia Figueiredo[1]
[1]Institute for Systems and Robotics / Instituto Superior Técnico, Lisbon, Portugal

761 Agree to Differ? Spatial Variance Drives Patterns of Significant Difference
John Suckling[1], Christine Ecker[2], Patrick Johnston[2], Meng-chuan Lai[3], Michael Lombardo[3], Simon Baron-Cohen[4], Declan Murphy[5], Edward Bullmore[6]
[1]University of Cambridge, Cambridge, United Kingdom, [2]Department of Forensic and Neurodevelopmental Sciences, Institute of Psychiatry, Kings College, London, United Kingdom, [3]Autism Research Centre, Department of Psychiatry, University of Cambridge, Cambridge, United Kingdom, [4]Autism Research Centre, Department of Psychiatry,University of Cambridge, Cambridge, United Kingdom, [5]Department of Forensic and Neurodevelopmental Sciences, Institute of Psychi, London, United Kingdom, [6]Department of Psychiatry, University Of Cambridge, Cambridge, United Kingdom

762 Effective degrees of freedom and the RFT resel count
Gerard Ridgway[1,2], Gareth Barnes[1], Karl Friston[1]
[1]Wellcome Trust Centre for Neuroimaging, London, United Kingdom, [2]UCL Institute of Neurology, London, United Kingdom

763 Repeated-Measures Designs Overestimate Between-Subject Effects In fMRI Packages Using One Error Term
Donald McLaren[1,2], Aaron Schultz[3], Joseph Locascio[1], Reisa Sperling[4], Alireza Atri[1,2]
[1]Dept. Neurology, Massachusetts General Hospital/Harvard Medical School, Boston, MA, [2]GRECC, Bedford VA Medical Center, Bedford, MA, [3]Dept. Psychiatry, Massachusetts General Hospital, Boston, MA, [4]Center for Alzheimer Research and Treatment/Dept. Neurology, BWH/Dept. Neurology, MGH, Boston, MA

764 New Statistical Tools for Multi-Modality Image Regression
Xue Yang[1], Lori Beason-Held[2], Susan Resnick[2], Bennett Landman[1]
[1]Vanderbilt University, Nashville, TN, [2]National Institute of Aging, National Institute of Health, Baltimore, MD

765 Withdrawn

766 Development of PowerMap: a software package for power analysis in neuroimaging studies
Karen Joyce[1], Satoru Hayasaka[1]
[1]Wake Forest University, Winston-Salem, United States

767 Univariate Autoregressive Modeling of Functional Echo-Volumar Magnetic Resonance Imaging Data
Radu Mutihac[1], Stefan Posse[2]
[1]1 University of New Mexico, Albuquerque, NM, [2]1 Univesrsity of New Mexico, Albuquerque, NM

Modeling and Analysis Methods

Other Methods

768* Volumetric Computational Model for Neurovascular Coupling and BOLD fMRI, (O-M4)
Zikuan Chen[1], Vince Calhoun[2]
[1]Mind Research Network, [2]Mind Research Network, Albuquerque, NM

769 Inferring Brain Activation from Spatial Modulations of fMRI BOLD Distribution**
Bernard Ng[1], Rafeef Abugharbieh[1], Jean Baptiste Poline[2], Bertrand Thirion[2]
[1]UBC, Vancouver, Canada, [2]INRIA, Gif Sur Yvette, France

770 Utilization, Congestion and Blocking in Large-scale Brain Networks**
Bratislav Misic[1], Anthony McIntosh[1]
[1]Rotman Research Institute - Baycrest Centre, Toronto, Canada

771 The Motor System Shows Region-specific Time-of-Day Differences in the Elderly
Isabella Peres[1], Evgeny Gutyrchik[1,2], Céline Vetter[1], Janusch Blautzik[3], Maximilian Reiser[3], Ernst Poeppel[2,1], Till Roenneberg[1], Thomas Meindl[3]
[1]Institute of Medical Psychology, Munich, Germany, [2]Human Science Center, Munich, Germany, [3]Institute of Clinical Radiology, Munich, Germany

772 Having your cake and eating it too: Model Free Detection analysis of er-fMRI data
Johan Jansma[1], Maura Furey[2], Nick Ramsey[1]
[1]Rudolf Magnus Institute of Neuroscience, UMC Utrecht, Utrecht, Netherlands, [2]Experimental Therapeutics and Pathophysiology Branch, NIH/NIMH, Bethesda, MD, USA

773 Spectral and Approximate EEG entropy: a comparative study in disorders of consciousness patients
Quentin Noirhomme[1], Rémy Lehembre[2], Marie-Aurelie Bruno[3], Camille Chatelle[4], Audrey Vanhaudenhuyse[5], Olivia Gosseries[3], Victor Cologan[6], Christophe Phillips[7], Steven Laureys[3], Andrea Soddu[6]
[1]University of Liege, [2]University of Liege, Liège, Belgium, [3]University of Liege, Belgium, Liege, Belgium, [4]University of Liège, Liège, Belgium, [5]Cyclotron Resaerch Center, University of Liège, Liège, Belgium, [6]University of Liege, Liege, Belgium, [7]University of Liege, Sart Tilman, Liege, Belgium

774 Integrated pipeline of brain extraction and inhomogeneity correction for difficult MRI data sets
Joost Mulders[1], Rainer Goebel[2]
[1]Brain Innovation, Maastricht, Netherlands, [2]Maastricht University, Maastricht, Netherlands

775 Reproducibility of structural BOLD and DTI data between identical scanners and after major repair
X Wang[1], L Huang[1], M Baliki[1], T Parrish[1], V Apkarian[1]
[1]Northwestern University, Chicago, IL

776 Multi-slice T2* Spectrum Estimation with Echo Relaxation Imaging
Jennifer Evans[1], Wenming Luh[2], Peter Bandettini[2]
[1]NIMH/NIH & CNRM/HJF, Bethesda, MD, [2]NIMH/NIH, Bethesda, MD

777 Conveying Confidence Intervals in fMRI Activation Maps
Philip Burton[1], Stephen Engel[1]
[1]University of Minnesota, Minneapolis, MN

778 Optimization of Contrast Detection Power using Probabilistic Behavioral Information
Dietmar Cordes[1], Mingwu Jin[2], Tim Curran[3], Rajesh Nandy[4]
[1]University Of Colorado Denver, Aurora, United States, [2]University of Colorado-Denver, Aurora, United States, [3]University of Colorado, Boulder, United States, [4]UCLA, Los Angeles, United States

779 Comparison Between FWE and FDR Corrections for Threshold Free Cluster Enhancement Maps
Krzysztof Gorgolewski[1], Amos Storkey[1], Mark Bastin[1], Cyril Pernet[1]
[1]University of Edinburgh, Edinburgh, United Kingdom

780 Fuzzy clustering for outlier detection: Applications in Functional Mapping in Epilepsy
Xiaohui Zhang[1], jagriti Arora[2], R. Todd Constable[3]
[1]Yale University, [2]Yale University, New Haven, CT, [3]Department of Diagnostic Radiology; Department of Biomedical Engineering, Yale University, New Haven, CT

781 Movement Trajectory Monitoring Using Conventional Image Processing for fMRI Studies
Toshiharu Nakai[1], Junichi Hasegawa[2], Wataru Hatanaka[3], Makoto Miyakoshi[4], Ichiro Takashima[5], Ayuko Tanaka[6], Kayako Matsuo[7]
[1]Neuroimaging & Informatics Lab, NCGG, Ohbu, Aichi, Japan, [2]Graduate School of Computer & Cognitive Science, Chukyo University, Toyota, Aichi, [3]LSST, Chukyo University, Toyota, Aichi, [4]Neuroimaging & Informatics Lab, NCGG, Ohbu, Aichi, [5]HTRI, AIST, Tsukuba, Ibaragi, [6]NIPH, Wako, Saitama, [7]National Taiwan University, Taipei, Taiwan, Republic of China

782 Simulating fMRI Data with realistic noise using *neuRosim*
Marijke Welvaert[1], Yves Rosseel[1]
[1]Department of Data Analysis, Ghent University, Gent, Belgium

783 BrainNet Viewer: A graph-based brain network mapping tool
Mingrui Xia[1], Jinhui Wang[1], Yong He[1]
[1]State Key laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

784 Dynamic experiments in functional magnetic resonance imaging
Lydia Hellrung[1], Maurice Hollmann[1], Oliver Zscheyge[1], Torsten Schlumm[2], Arno Villringer[1,3,4], Burkhard Pleger[1,3,4]
[1]Dept. Neurology, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Dept. NMR, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]Clinic for Cognitive Neurology, University Hospital, Leipzig, Germany, [4]Mind & Brain Institute, Berlin School of Mind and Brain, Humboldt-University, Berlin, Germany

785 The Pitfalls of Pooling Evidence: Insights Gained in a Re-Analysis of Three Published Meta-Analyses
Wolfgang Huf[1,2,3], Klaudius Kalcher[1,2,3], Gerald Pail[1], Roland Boubela[1,2,3], Lukas Pezawas[1], Christian Windischberger[2], Ewald Moser[2], Michaela-Elena Friedrich[1], Peter Filzmoser[3], Siegfried Kasper[1]
[1]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria, [2]Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria, [3]Department of Statistics and Probability Theory, Vienna University of Technology, Vienna, Austria

786 A novel artifact reduction strategy for detecting changes in muscle activity during fMRI
Jaimie Dougherty[1], Karen Moxon[1], Chris Conklin[2], Scott Faro[2], Feroze Mohamed[2]
[1]Drexel University, Philadelphia, PA, [2]Temple University, Philadelphia, PA

787 Implementation of the NINDS Traumatic Brain Injury Common Data Elements using caBIG AIM Model
Ashish Hinger[1], Dzung Pham[1], Pattanasak Mongkolwat[2], John Butman[3]
[1]Center for Neuroscience and Regenerative Medicine, Henry M. Jackson Foundation, Bethesda, MD, [2]Department of Radiology, Northwestern University, Chicago, IL, [3]Diagnostic Radiology Department, National Institutes of Health, Bethesda, MD

788 Applications of stereoscopic 3D in morphometric and functional imaging
Gonzalo Rojas[1], Marcelo Galvez[2], Jorge Cordovez[2], Daniel Margulies[3], F Xavier Castellanos[4,5], Michael Milham[4,5]
[1]Laboratory of Medical Image Processing, Department of Radiology, Las Condes Clinic., Santiago, Chile, [2]Department of Radiology, Las Condes Clinic, Santiago, Chile, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [4]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, [5]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY

789 A System for Addressing Incidental Findings in Neuroimaging Research
Steven Cramer[1], Jennifer Wu[1], Joseph Hanson[1], Sarvenaz Nouri[1], Diraj Karnani[1], Tony Chuang[1], Vu Le[1]
[1]University of California, Irvine, Irvine, CA

790 NeuroDebian: versatile platform for brain imaging research
Michael Hanke[1,2], Yaroslav Halchenko[1], James Haxby[1]
[1]Dartmouth College, Hanover, NH, USA, [2]University of Magdeburg, Magdeburg, Germany

791 Skull Stripping Influence on Cortical Surface Reconstruction : A Landmark Validation
Aaron Carass[1], Min Chen[1], Jennifer Cuzzocreo[2], Jerry Prince[1]
[1]Johns Hopkins University, Baltimore, MD, [2]Johns Hopkins School of Medicine, Baltimore, MD

792 Physiological and Haemodynamical Analysis of Cerebral Blood Volume Changes During Brain Activation
Steffen Krieger[1], Markus Streicher[1], Robert Trampel[2], Robert Turner[2]
[1]Max-Plank-Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

793 Visualization and Modular Plug-In based Data-Analysis of Real-Time fMRI Data
Claudia Hänel[1], Charles Mueller[1], Johannes Bernarding[1]
[1]IBMI, Otto-Von-Guericke-University, Magdeburg, Germany

794 Multivariate approaches for NIRS: Very low frequency oscillations in the prefrontal cortex
Joachim Ortmann[1], Christoph Kaller[2], Johannes Ackermann[2], Linda Sommerlade[1], Jens Timmer[1], Cornelius Weiller[2], Matthias Schroeter[3], Bjoern Schelter[1]
[1]Center for Data Analysis and Modeling, University of Freiburg, Freiburg, Germany, [2]FBI, Neurology Department, University Medical Center Freiburg, Freiburg, Germany, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

795 Comparing GLM, ICA and combined approaches for fMRI data with possible inaccuracy
Michal Mikl[1], Radek Marecek[2], Radovan Přikryl[3], Milan Brazdil[2]
[1]Masaryk University, Brno, [2]First Department of Neurology, Masaryk University, St. Anne's Faculty Hospital, Pekarska 53, Brno 65, Brno, Czech Republic, [3]Department of psychiatry, Masaryk University, Brno, Czech Republic

796 Withdrawn

797 Comparison of brain SPECT analysis with SPM and NeuroGam in Patients with Headache
KyungAh Chun[1], IhnHo Cho[1], JuHye Jeong[1], EunJung Kong[1]
[1]Yeungnam University Hospital, Daegu, Korea, Republic of

Language

Language Acquisition

798 Learning and Fast-Mapping Meanings to Novel Object in Children: A MEG Study
Charline Urbain[1,2], Rémy Schmitz[1], Mathieu Bourguignon[2], Marc Op De Beeck[2], Sophie Galer[1,2], Xavier De Tiège[2], Patrick Van Bogaert[2], Philippe PEIGNEUX[1]
[1]UR2NF - Neuropsychology and Functional Neuroimaging Research Unit, Université Libre de Bruxelles, Bruxelles, Belgium, [2]LCFC - Laboratoire de Cartographie Fonctionnelle du Cerveau, Hôpital Erasme, Bruxelles, Belgium

799 Prosodic Network in the Neonatal Brain
Fumitaka Homae[1], Hama Watanabe[2], Takayuki Otobe[3], Tamami Nakano[4], Tohshin Go[5,6], Yukuo Konishi[7,6], Gentaro Taga[2,8]
[1]Tokyo Metropolitan University, Tokyo, Japan, [2]University of Tokyo, Tokyo, Japan, [3]Jin-ai Women's College, Fukui, Japan, [4]Juntendo University, Tokyo, Japan, [5]Kyoto University, Kyoto, Japan, [6]Tokyo Women's Medical University, Tokyo, Japan, [7]Doshisha University, Kyoto, Japan, [8]CREST/JST, Kawaguchi, Japan

800 Childrens' Language Comprehension depends on Gray Matter Density in the left Inferior Parietal Lobe
Anja Hubert[1], Lars Meyer[1], Michael Skeide[1], Angela Friederici[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

801 Differential effects of age of acquisition of bilingualism on white matter neuroplastic changes
Ana Sanjuán[1], Gabriele Garbin[1], Aina Rodríguez Pujadas[1], Noelia Ventura-Campos[2], Maria Antonia Parcet[1], César Ávila Rivera[2]
[1]Universitat Jaume I, Castellón, Spain, [2]Universitat Jaume I, Castellon, Spain

802 Handedness and Language Lateralization in Children
Jerzy Szaflarski[1], Anna Byars[2], Lisa Jacola[3], Vincent Schmithorst[2], Mekibib Altaye[2], Mark Schapiro[2], Akila Rajagopal[4], Elena Plante[5], Scott Holland[6]
[1]University of Cincinnati, Cincinnati, United States, [2]Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [3]University of Cincinnati Department of Psychology, Cincinnati, OH, [4]Pediatric Neuroimaging Research Consortium, Cincinnati, United States, [5]University of Arizona, Tucson, AZ, [6]Cincinnati Children's Hospital, University of Cincinnati, Cincinnati, United States

803 A fNIRS investigation of newborn abilities to discriminate maternal and foreign languages
Berta González-Frankenberger[1,2,3], Natacha Paquette[1,2], Phetsamone Vannasing[1], Julie Tremblay[1], Olivia Florea[2], Beland Renée[2], Fabrice Wallois[4], Franco Lepore[2], Maryse Lassonde[2]
[1]Research Center, University Hospital Center Sainte-Justine, Montréal, QC, Canada, [2]Centre de Recherche en Neuropsychologie et Cognition, Université de Montréal, Montréal, QC, Canada, [3]Instituto de Neurobiología, Universidad Nacional Autónoma de México, Querétaro, México, [4]GRAMFC, Neurophysiology Laboratory, Faculty of Medicine, University of Picardie, Amiens, France

804 The Neural Correlates of Second Language Learning: Cross-linguistic Transfer effects
Ladan Ghazi Saidi[1,2], Ana Inés Ansaldo[2]
[1]University of Montreal, [2]CRIUGM, Montreal, Canada

Language

Language Comprehension and Semantics

805* The multimodal cortex of the superior temporal sulcus: a hotspot of language evolution?, (O-T3)
Patricia Morosan[1], Katrin Amunts[1,2,3], Karl Zilles[1,3,4]
[1]Institute of Neuroscience and Medicine, Research Centre Juelich, Juelich, Germany, [2]Department of Psychiatry and Psychotherapy, RWTH Aachen University, Aachen, Germany, [3]Juelich – Aachen Research Alliance (JARA), Juelich-Aachen, Germany, [4]C.&O. Vogt Institute of Brain Research, Düsseldorf, Germany

806* Tracking Neural Coding of Perceptual and Semantic Attributes during Word Comprehension, (O-T3)
Gustavo Sudre[1], Dean Pomerleau[2], Leila Wehbe[1], Alona Fyshe[1], Mark Palatucci[1], Tom Mitchell[1]
[1]Carnegie Mellon University, Pittsburgh, PA, [2]Intel Labs, Pittsburgh, PA

807* Developmental Changes in Audiovisual Integration of Speech and Accompanying Gestures, (O-T3)
Susan Lee[1], Serene Habayeb[2], Loisa Bennetto[2]
[1]University of Rochester School of Medicine & Dentistry, Rochester, NY, [2]University of Rochester, Rochester, NY

808 Decoding Semantic Categories from Pictures, Words and Natural Sounds
Irina Simanova[1], Marcel van Gerven[2], Robert Oostenveld[2], Peter Hagoort[3]
[1]Max Planck Institute for Psycholinguistics, N/A, [2]Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands, [3]Max Planck Institute for Psycholinguistics, Nijmegen, Netherlands

809 The locative alternation: Linguistic processing cost and error signals in Broca's region
Ken Christensen[1], Mikkel Wallentin[2]
[1]Aarhus University, Aarhus C, Denmark, [2]CFIN, Aarhus University, Aarhus C, Denmark

810 Temporal Organization of Neural Processing for the Constituent Structure of Sentences: An MEG study
Masaki Maruyama[1,2], Stanislas Dehaene[3,2,4,5]
[1]Inserm U.992 - Neuroimagerie Cognitive, CEA, DSV/I2BM, NeuroSpin Center, F-91191 Gif/Yvette, France, [2]CEA, DSV/I2BM, NeuroSpin Center, F-91191 Gif/Yvette, France, [3]INSERM, U992, Cognitive Neuroimaging Unit, CEA, DSV/I2BM, NeuroSpin Center, F-91191 Gif/Yvette, France, [4]Univ Paris-Sud, Univ Paris-Sud, France, [5]Collège de France, F-75005 Paris, France

811 Like cat and dog? Neural correlates of positive and negative emotional associations in depression
Katharina Sass[1,2], Ute Habel[1,2], Thilo Kellermann[1,2], Klaus Mathiak[1,3,2], Siegfried Gauggel[1], Tilo Kircher[4]
[1]RWTH Aachen University, Aachen, Germany, [2]JARA – Translational Brain Medicine, Germany, [3]Research Centre Jülich, Germany, Jülich, Germany, [4]Philipps-University Marburg, Marburg, Germany

812 Hierarchical Semantic Clustering and Cosine Similarity of fMRI Response in Right Fusiform Gyrus
Rose Bruffaerts[1], Patrick Dupont[1], Ronald Peeters[2], Gerrit Storms[1], Simon De Deyne[1], Rik Vandenberghe[1]
[1]KU Leuven, Leuven, Belgium, [2]UZ Leuven, Leuven, Belgium

813 Neural Correlates of Ambiguous and Unambiguous Verb Processing
Aya Meltzer Asscher[1], Julia Schuchard[1], Dirk-Bart den Ouden[2], Cynthia Thompson[1]
[1]Northwestern University, Evanston, IL, [2]University of South Carolina, Columbia, SC

814 The influence of novelty and context on hemispheric recruitment in processing metaphors
Michele Diaz[1], Kyle Barrett[2], Larson Hogstrom[2]
[1]Duke University, Durham, United States, [2]Duke University, Durham, NC

815 An MEG study of the negative polarity item *any* to assess sentence-level semantic processing
Graciela Tesan[1], Blake Johnson[2], Stephen Crain[3]
[1]Macquarie University, Macquarie Park, Australia, [2]Macquarie University, Sydney, New South Wales, [3]Macquarie University, Sydney, Australia

816 Hemispheric involvement in the resolution of semantic ambiguity depends on phonological ambiguity
Tali Bitan[1], Asaf Kaftory[1], Adi Leib[1], Andrey Markus[1], Orna Peleg[1], Zohar Eviatar[1]
[1]University of Haifa, Haifa, Israel

817 The Conceptual Brain: Telicity modulates neural activity in verb processing cortical areas
Domenica Romagno[1], Giuseppina Rota[2], Emiliano Ricciardi[2,3], Pietro Pietrini[2,3]
[1]Department of Linguistics–University of Pisa, Pisa, Italy, [2]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [3]Department of Laboratory Medicine and Molecular Diagnostics, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy

818 Flexibility in embodied lexical-semantic representations
Wessel van Dam[1], Margriet van Dijk[1], Harold Bekkering[1], Shirley-Ann Rueschemeyer[1]
[1]Radboud University, Nijmegen, Netherlands

819 Investigating oscillatory dynamics of lexical-semantic processing using a semantic priming paradigm
Monika Mellem[1], Andrei Medvedev[2], Rhonda Friedman[3]
[1]Interdisciplinary Program in Neuroscience, Georgetown University, Washington, DC, [2]Center for Functional and Molecular Imaging, Dept. of Neurology, Georgetown University Medical Cntr, Washington, DC, [3]Center for Aphasia Research and Rehabilitation, Dept. of Neurology, Georgetown University, Washington, DC

820 Progression of Word Processing from Occipital to Left Inferior Temporal Cortex
Melissa Rundle[1], Andrew Connolly[1], Richard Granger[1]
[1]Dartmouth College, Hanover, NH

821 The Role of Language Age of Acquisition and Proficiency In and Noun and Verb Processing in Bilingua
Monica Consonni[1], Riccardo Cafiero[1], Dario Marin[2], Marco Tettamanti[3], Franco Fabbro[4], Daniela Perani[5]
[1]Vita-Salute San Raffaele University, Milano, Italy, [2]IRCCS "E. Medea", Polo del Friuli Venezia Giulia, Udine, Italy, [3]Department of Nuclear Medicine and Division of Neuroscience, Scientific Institute San Raffaele, Milano, Italy, [4]Department of Philosophy, University of Udine, Udine, Italy, [5]Faculty of Psychology, Vita-Salute San Raffaele University, Milano, Italy, Milano, Italy

822 The concreteness effect in implicit and explicit memory tests by directed forgetting paradigm
Xin Xiao[1], Chunyan Guo[1]
[1]Capital Normal University, Beijing, China

823 The Neural Basis of Linguistic Prosody Discrimination in Healthy Children and Young Adults
David Henkel[1], Kenneth Eaton[1], Scott Holland[1], Vincent Schmithorst[1], Jennifer Vannest[1]
[1]Cincinnati Children's Hospital Medical Center, Pediatric Neuroimaging Research Consortium, Cincinnati, OH

824 Coupling Differences between Wernicke and Broca's Areas according to Lexicality in Normal Adults
Autumn McIlraith[1,2,3], Jordan Green[1,2], Tiffany Hogan[1,2], Tony Wilson[3,4]
[1]University of Nebraska - Lincoln, Lincoln, NE, [2]Neurogenetic Communication Disorders Consortium, Munroe-Meyer Institute, University of Nebraska Medical Center, Omaha, NE, [3]Center for Magnetoencephalography, Omaha, NE, [4]Department of Pharmacology & Experimental Neuroscience, University of Nebraska Medical Center, Omaha, NE

825 Sex Differences in Neural Recruitment for Improved Verb Generation Performance
Jane Allendorfer[1], Miriam Siegel[1], Christi Banks[1], Christopher Lindsell[1], Jennifer Vannest[2], Scott Holland[3], Jerzy Szaflarski[1]
[1]University of Cincinnati, Cincinnati, United States, [2]Cincinnati Children's Hospital, Cincinnati, United States, [3]Cincinnati Children's Hospital, University of Cincinnati, Cincinnati, United States

826 Wisconsin Word Sorting Task: mapping the common and specific regions involved in phonological and s
France Simard[1], Simona Maria Brambati[1], Cecile Madjar[1], Oury Monchi[1]
[1]Functional Neuroimaging Unit, CRIUGM & University of Montreal, Montreal, QC, Canada

827 Activation of voice-selective brain areas in response to written and auditory quotations
Bo Yao[1], Pascal Belin[2], Christoph Scheepers[1]
[1]University of Glasgow, Glasgow, United Kingdom, [2]Centre for Cognitive Neuroimaging, Glasgow, United Kingdom

828 The differential role of the left and right ATL for semantic processing of pictures and names
Simona Maria Brambati[1], Maximiliano Wilson[2], Sylvie Belleville[3], Yves Joanette[3], Isabelle Rouleau[4], Sven Joubert[5]
[1]Centre de Recherche - IUGM, Montréal, QC, Canada, [2]Centre de recherche - IUGM, Montréal, QC, [3]Centre de recherche - IUGM, Montreal, Quebec, [4]Département de psychologie, Université du Québec à Montréal (UQAM), Montreal, Quebec, [5]Centre de recherche - IUGM, Montreal, Canada

829 Neural Correlates of Semantic Comprehension of Abstract and Concrete Words : Evidence from MEG
Jacinthe Lacombe[1,2], Stephan Grimault[1], Yann Potiez[1], Sophie Benoit[3], Pierre Jolicoeur[1], Sven Joubert[1,2]
[1]CERNEC, Université de Montréal, Montreal, Canada, [2]CRIUGM, Montreal, Canada, [3]Université du Québec à Montréal, Montreal, Canada

830 Integration of written words assessed by High Resolution EEG sources reconstruction
Gaetan Yvert[1], Marcela Perrone-Bertolotti[2], Olivier David[3], Monica Baciu[2]
[1]Laboratoire de Psychologie et Neurocognition, UMR CNRS 5105, UPMF, Grenoble, France, [2]LPNC, Grenoble, France, [3]GIN, Grenoble, France

831 Modulation effect of perceptual, motor and affective content in auditory story comprehension
Ho Ming Chow[1], Allen Braun[1]
[1]NIDCD/NIH, Bethesda, United States

832 Category-Dependent Effect in Neural Processing of Semantic Relatedness
Masahiro Hata[1], Hidekazu Yarimizu[1], Lisa Sugiura[1], Fumitaka Homae[1], Hiroko Hagiwara[1]
[1]Tokyo Metropolitan University, Tokyo, Japan

833 Neural Correlates of Inferential Processing in the Comprehension of Utterances
Sung-en Lee[1], Shin-ae Yoon[2], Eun Joo Kim[3], Joohan Kim[4], Hae-Jeong Park[2]
[1]Department of Radiology, Nuclear Medicine and Research Institute of Radiological Science, Yonsei Uni, [2]Department of Radiology and Psychiatry, Severance Biomedical Science Institute, Yonsei University, Seoul, Korea, Republic of, [3]The department of the graduate School of Education, Yonsei University, Seoul, Korea, Republic of, [4]The department of graduate school of Communication, Yonsei University, Seoul, Korea, Republic of

834 ERP Investigation of Argument Structure and Semantic Processing in Healthy and Aphasic Adults
Aneta Kielar[1], Cynthia Thompson[2]
[1]Northwestern University, Evanston, Illinois, USA, [2]Northwestern University, Evanston, Illinois, USA

835 Action Verbs Yield BOLD Response in LPMT, Anterior to V5, During Story Comprehension
Mikkel Wallentin[1], Andreas Nielsen[2], Peter Vuust[2], Anders Dohn[2], Andreas Roepstorff[2], Torben Lund[2]
[1]CFIN, Aarhus University, Aarhus C, Denmark, [2]Aarhus University, Aarhus C, Denmark

836 Why not say it directly? Neural basis of indirect speech comprehension
Midori Shibata[1], Yuri Terasawa[1], Satoshi Umeda[2]
[1]Center for Advanced Research on Logic and Sensibility (CARLS), Keio University, Tokyo, Japan, [2]Keio University, Tokyo, Japan

837 Neural correlates of treatment effects on abstract and concrete words in aphasia: A pilot study
Chaleece Sandberg[1], Swathi Kiran[1]
[1]Boston University, Boston, USA

838 Processing of Factually Correct and Incorrect Sentences Involves Different Processes
Tao Yu[1], Simone Lang[2], Alexandra Markl[3], Dominik Vogel[3], Friedemann Mueller[3], Ranganatha Sitaram[4], Boris Kotchoubey[1]
[1]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany, [2]Institute of Psychology, University of Heidelberg, Heidelberg, Germany, [3]Clinic of Neurology, Bad Aibling, Bad Aibling, Germany, [4]IInstitute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany

839 Investigating neural networks in quantifiers: Logical quantifiers versus Numerical quantifiers
Sailee Shikhare[1], Stefan Heim[2,3,4], Elise Klein[1,5,6], Klaus Willmes[1,5]
[1]Section Neuropsychology, RWTH Aachen University, Germany, [2]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [3]Research Centre Jülich, Institute of Neurosciences and Medicine (INM-1), Jülich, Germany, [4]Jülich-Aachen Research Alliance (JARA-BRAIN), Jülich, Germany, [5]Interdisciplinary Center for Clinical Research Aachen, RWTH Aachen, Germany, [6]Department of Psychology, Eberhard Karls University, Tuebingen, Germany

840 Differences in neural substrates of comprehension in L1 in bilinguals and monolinguals
Aina Rodríguez Pujadas[1], Patricia Román[2], Noelia Ventura-Campos[1], Ana Sanjuán[3], Julio González[1], César Ávila Rivera[1]
[1]Neuropsychology & functional Neuroimaging. Universitat Jaume I, Castellon, Spain, [2]Max Planck Institute, Leipzig, Germany, [3]Neuropsychology & functional Neuroimaging. Universitat Jaume I, Castellón, Spain

Learning and Memory

Implicit Memory

841* Image-Invariant Neural Priming of Faces is Associated with Changes in Functional Connectivity of FFA, (O-T4)
W. Dale Stevens[1], R. Nathan Spreng[1], Brendan Gaesser[1], Daniel Schacter[1]
[1]Harvard University, Cambridge, MA

842 Distinct Neural Mechanisms Underlying Multiple Repetition Effects during Working Memory Retrieval
Chunyan Guo[1,2], Brian Gold[3,4], Yang Jiang[2,4]
[1]Capital Normal University, Beijing Key Laboratory of Learning and Cognition, Beijing, China, [2]University of Kentucky, Department of Behavioral Science, Lexington, KY United States, [3]University of Kentucky Department of Anatomy and Neurobiology, Lexington, KY United States, [4]MRISC and Sanders Brown Center on Aging, College of Medicine, Lexington, KY United States

Learning and Memory

Long-Term Memory (Episodic and Semantic)

843* **Retrieving out-of-body experiences: Hippocampus activity depends on the encoded visual perspective, (O-T4)**
Loretxu Bergouignan[1], Lars Nyberg[2], H Ehrsson[1]
[1]Karolinska Institute, Stockholm, Sweden, [2]Umeå University, Umeå, Sweden

844 **Dynamic Neural Networks Supporting Autobiographical Memory Retrieval**
Peggy StJacques[1], Philip Kragel[2]
[1]Harvard University, Cambridge, MA, [2]Duke University, Durham, NC

845 **Mediotemporal correlates of metamemory: An iEEG study**
Anne Do Lam[1]
[1]Epileptology, University of Bonn, Bonn, Germany

846 **Relating brain network variability to the unfolding of human memory processes**
Jennifer Heisz[1], Judith Shedden[2], Anthony McIntosh[1]
[1]Rotman Research Institute, Toronto, Canada, [2]McMaster University, Hamilton, Ontario

847 **Structural alterations in the left temporal cortex related to episodic memory scores in HIV patients**
Charlotte Bernard[1,2], Bixente Dilharreguy[1], Michèle Allard[1,2], Hélène Amieva[3], Fabrice Bonnet[3,4], Frédéric Dauchy[4], Carine Greib[4], Mathias Bruyand[3], Gwénaëlle Catheline[1,2], the ANRS C03 Aquitaine cohort group[3]
[1]Université de Bordeaux, INCIA, CNRS UMR 5287, Bordeaux, France, [2]EPHE, Bordeaux, France, [3]ISPED, INSERM U 897, Bordeaux, France, [4]CHU, Bordeaux, France

848 **The genetics of cognitive changes of older adults: An fMRI study of memory monitoring and the serotonin transporter**
Jennifer Pacheco[1], John McGeary[2], Christopher Beevers[1], David Schnyer[1]
[1]Department of Psychology, The University of Texas At Austin, Austin, TX, [2]Providence VA Medical Center and Center for Alcohol and Addiction Studies, Brown University, Providence, RI

849 **The Neural Correlates of Perceptual Richness in Complex Episodic Memory Retrieval**
Marie St-Laurent[1,2], Morris Moscovitch[3], Mary Pat McAndrews[4]
[1]University of Toronto, Ontario, Canada, [2]Toronto Western Research Institute and Krembil Neuroscience Center, Toronto, Ontario, Canada, [3]University of Toronto, Toronto, Canada, [4]University Health Network - U of Toronto, Toronto, Canada

850 **Hippocampus maintains activation for the retrieval of remote episodic but not semanticized memories**
Caroline HARAND[1], Françoise BERTRAN[1], Renaud La Joie[1], Brigitte Landeau[1], Florence Mézenge[1], Hervé Platel[1], Béatrice Desgranges[1], Philippe Peigneux[2], Bruno Bontempi[3], Francis Eustache[1], Géraldine RAUCHS[1]
[1]Inserm-EPHE-UCBN, Unité U923, Caen, France, [2]Université Libre de Bruxelles, UR2NF, Bruxelles, Belgium, [3]CNRS UMR 5228, CNIC, Université de Bordeaux 1, Talence, France

851 **Anticipatory "replay" response in the hippocampus while viewing and reviewing a dynamic video**
Philip Kohn[1], Anees Benferhat[1], Jonathan Kippenhan[1], Daniel Eisenberg[1], Karen Berman[1]
[1]National Institutes of Health, Bethesda, MD

852 **Hippocampal volume and stress reactivity in stressful versus non-stressful testing environments**
Shireen Sindi[1], Robert-Paul Juster[2], Catherine Lord[3], Sonia Lupien[3], Jens Pruessner[2]
[1]McGill University, [2]McGill University, Montreal, Quebec, [3]University of Montreal, Montreal, Quebec

853 **Memory for emotional details, how the middle-aged brain fares**
Halle Zucker[1], Elizabeth Kensinger[1]
[1]Boston College, Chestnut Hill, MA

854 **Hippocampal and Amygdalar Responses to the Novelty of Future Simulations**
Valerie van Mulukom[1,2], Daniel Schacter[3], Michael Corballis[1,2], Donna Rose Addis[4,2]
[1]Dept. of Psychology, University of Auckland, Auckland, New Zealand, [2]Centre for Brain Research, University of Auckland, Auckland, New Zealand, [3]Dept. of Psychology, Harvard University, Cambridge, MA, [4]Dept. of Psychology, The University of Auckland, Auckland, New Zealand

855 **Brain networks for associative memory revealed by structural equation modeling**
Yoon-Kyoung Yim[1], Hyejin Kang[1], Heejung Kim[1], Hyojin Park[1], Dong Soo Lee[1], Eunjoo Kang[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Kangwon National University, Chuncheon, Republic Of Korea

856 **Interaction between semantic and episodic memory in Alzheimer's disease and normal aging:a MEG study**
Valentina La Corte[1,2,3], Nathalie George[1,2,3], Jean-Didier Lemaréchal[1,2,3], Gianfranco Dalla Barba[1,2,3,4]
[1]Université Pierre et Marie Curie-Paris VI, CRICM, UMR-S975, Paris, France, [2]INSERM, U 975, Paris, France, [3]CNRS, UMR 7225, Paris, France, [4]AP-HP, Hôpital Henri Mondor, Service de Neurologie, Créteil, France

857 **White matter maturation in prefrontal cortex contributes to the development of declarative memory**
Xiaoqian Chai[1], Noa Ofen[1], Elizabeth Gutierrez[1], Satrajit Ghosh[1], John Gabrieli[1]
[1]MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MA, United States

858 Prefrontal and medial temporal contributions to recognition memory over short retention intervals
Craig Brozinsky[1], Mark D'Esposito[1]
[1]Helen Wills Neuroscience Institute, UC Berkeley, Berkeley, CA

859 Gender Differences in Autobiographical Memory Recall
Kymberly Young[1], Patrick Bellgowan[1], Wayne Drevets[1,2]
[1]Laureate Institute for Brain Research, Tulsa, OK, [2]Oklahoma University College of Medicine, Dept. of Psychiatry, Tulsa, OK

860 Neural mechanisms of semantic organizational strategies in normal aging: An ERP study
Julie Fortin[1], Sophie Blanchet[1]
[1]Centre for Interdisciplinary Research in Rehabilitation and Social Integration, Québec,Canada

861 Impact of divided attention on associative strategy during episodic encoding: An ERP study
Andrée-Anne Paradis-Giroux[1], Michel Pépin[2], Blanchet Sophie[3]
[1]Centre of Interdisciplinary Research in Rehabilitation and Social Integration (CIRRIS), [2]Laval University, Québec, Quebec, [3]Centre of Interdisciplinary Research in Rehabilitation and Social Integration (CIRRIS), Quebec, Quebec

862 Basal functional connectivity within anterior temporal network and declarative memory performances
Natalina Gour[1,2,3], Jean-Philippe Ranjeva[2,3], Mathieu Ceccaldi[1,3], Sylviane Confort-Gouny[2,3], Emmanuel Barbeau[4,5], Elisabeth Soulier[2,3], Maxime Guye[2,3], Mira Didic[1,3], Olivier Felician[1,3]
[1]Laboratoire Epilepsies et Cognition, INSERM U751, Marseille, France, [2]Centre de Résonance Magnétique Biologique et Médicale (CRMBM), UMR CNRS 6612, Marseille, France, [3]Assistance Publique-Hôpitaux de Marseille, Hôpital de la Timone, Marseille, France, [4]Université de Toulouse; UPS; Centre de Recherche Cerveau et Cognition, Toulouse, France, [5]CNRS, CerCo, Toulouse, France

863 The Effects of emotions on associative memory: an fMRI study,
David Luck[1], Martin Lepage[2]
[1]McGill University, [2]McGill University, Montreal, Canada

Learning and Memory

Neural Plasticity and Recovery of Function

864* Transient Neural Plasticity in Human Motor Cortex, (O-T4)
Hanzhang Lu[1], KC Tung[1], Jinsoo Uh[1], Feng Xu[1]
[1]University of Texas Southwestern Medical Center, Dallas, TX

865 The effects of the training of multi tasks on brain structures**
Hikaru Takeuchi[1], Yasuyuki Taki[1], Rui Nouchi[1], Hiroshi Hashizume[1], Atsushi Sekiguchi[1], Yuka Kotozaki[1], Seishu Nakagawa[1], Carlos Makoto Miyauchi[1], Yuko Sassa[1], Ryuta Kawashima[1]
[1]IDAC, Tohoku University, Sendai, Japan

866 Lack of cross-modal plasticity in Leber's congenital amaurosis patients receiving gene therapy
Laura Cyckowski[1], Manzar Ashtari[2], Kathleen Marshall[2], Albert Maguire[3], Kenneth Shindler[3], Jean Bennett[3]
[1]Children's Hospital of Philadelphia, Philadephia, PA, US, [2]Children's Hospital of Philadelphia, Philadelphia, PA, [3]Scheie Eye Institute, University of Pennsylvania School of Medicine, Philadelphia, PA

867 Neural Substrates of Plasticity in Working Memory in Aging
Stephan Heinzel[1], Robert Lorenz[1], Christine Stelzel[1], Michael Rapp[1]
[1]Psychiatric University Hospital, Charité Campus Mitte, Berlin, Germany

868 Ultra-fast recovery from right neglect after "awake surgery" for slow-growing tumor
Francois Bonnetblanc[1], Hugues Duffau[2], Etienne Sallard[3]
[1]INSERM U887, Dijon, France, [2]Hopital Gui de Chauliac & INSERM, Institut des Neurosciences de la Méditerranée, Montpellier, France, [3]Université de Lausanne, Lausanne, Switzerland

869 The effects of the training of simple numerical calculation on brain structures
Tomomi Nagase[1], Hikaru Takeuchi[2], Yasuyuki Taki[2], Yuko Sassa[2], Hiroshi Hashizume[2], Ryuta Kawashima[2]
[1]TOHOKU UniV, Sendai,Japan, [2]IDAC, TOHOKU UniV, Sendai, Japan

870 Changes in functional connectivity in patients with Broca's aphasia following intensive therapy
Catherine Wan[1], Sarah Marchina[1], Andrea Norton[1], Gottfried Schlaug[1]
[1]Beth Israel Deaconess Medical Center / Harvard Medical School, Boston, United States

871 **Spatiotemporal Brain Markers of Neuroplasticity in Carpal Tunnel Syndrome**
RUPALI DHOND[1], Emily Ruzich[1], Thomas Witzel[1], Wei-Ta Chen[2], Pia Hugus[1], Yumi Maeda[1], Cristina Malatesta[3], Leslie Morse[3], Joseph Audette[4], Vitaly Napadow[1]
[1]Harvard Medical School - MGH, Martinos Center for Biomedical Imaging, Charlestown, MA, USA, [2]Neurological Institute, Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China, [3]Department of Physical Medicine and Rehabilitation Spaulding Rehabilitation Hospital, Medford, MA, [4]Department of Pain Medicine, Harvard Vanguard Medical Associates, Atrius Health, Charlestown, MA, USA

872 **Neural Plasticity Correlates Of The Thumb Extension Recovery After Tendon Transfer. A Case Study**
Olivier MARTIN[1], Fabrizio Pizzagalli[2], Chantal Delon-Martin[3], Michel Dojat[4], Franck QUAINE[5], François MOUTET[6]
[1]GIPSA-lab, CNRS, Grenoble University, Grenoble, France, [2]Grenoble University & INSERM U836, Grenoble, France, [3]INSERM U836, La Tronche, France, [4]INSERM / CEA / Univ. Joseph Fourier Grenoble 1 / CHU, U836 GIN, Grenoble, France, [5]GIPSA-lab CNRS UMR 5216, Grenoble, France, [6]Grenoble University Hospital, Unit of Hand Surgery, Grenoble , France

873 **Altered corticomotor excitability in patients with subcortical stroke after interleaved practice**
Chien-Ho Janice Lin[1], Barbara Knowlton[2], Ming-Chang Chiang[3], Parima Udompholkul[4], Marco Iacoboni[5], Allan Wu[6]
[1]Ucla, United States, [2]Psychology, UCLA, Los Angeles, CA, [3]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, [4]Neurology, UCLA, Los Angeles, CA, [5]UCLA BRAIN MAPPING CENTER, Los Angeles, United States, [6]Neurology, UCLA, Los Angeles , CA

874 **Binaural Processing is Abnormal in Children Receiving Bilateral Cochlear Implants Sequentially**
Daniel Wong[1], Karen Gordon[1]
[1]The Hospital for Sick Children, Toronto, Canada

Lifespan Development

Aging

875* ***CACNA1C* polymorphism modulates age-related changes in brain circuitry during memory retrieval, (O-W1)**
Michael White[1], John Muse[1], Kristin Bigos[1], Roberta Rasetti[1], Saumitra Das[1], Joseph Callicot[1], Venkata Mattay[1], Daniel Weinberger[1]
[1]National Institute of Mental Health, National Institutes of Health, Bethesda, MD, USA

876* **Regional reduction in fractional anisotropy as an early marker of glucose-related brain damage, (O-W1)**
Heike Wersching[1,2], Michael Deppe[2], Christoph Stehling[3], Stefan Knecht[2], Thomas Duning[2]
[1]Institute of Epidemiology and Social Medicine, University of Münster, Münster, Germany, [2]Department of Neurology, University of Münster, Münster, Germany, [3]Department of Clinical Radiology, University of Münster, Münster, Germany

877* **Executive function is associated with white matter integrity of the prefrontal cortex during aging, (O-W1)'**
Paul Borghesani[1], Elizabeth Aylward[2], Tara Madhyastha[3], Warner Schaie[3], Sherry Willis[3]
[1]University Of Washington, Seattle, WA, [2]Seattle Children's Research Institute, Seattle, WA, [3]University of Washington, Seattle, WA

878* **Reduced Organization of the Default Mode Network in the Aging Brain: Association with Cognition, (O-W1)**
Tyler Triggs[1], Douglas Greve[2], J Chen[2], H. Diana Rosas[3], David Salat[4]
[1]MGH Neurology/MGH/MIT/HMS Athinoula A. Martinos Center for Biomedical Imaging, Charlestown , MA, [2]MGH Radiology/MGH/MIT/HMS Athinoula A. Martinos Center for Biomedical Imaging, Charlestown, MA, [3]MGH Neurology/MGH/MIT/HMS Athinoula A. Martinos Center for Biomedical Imaging, Charlestown, MA, [4]MGH Radiology/MGH/MIT/HMS Athinoula A. Martinos Center for Biomedical Imaging; Boston VA Healthcare, Charlestown, MA

879* **Impact of lifestyle parameters on accelerated brain aging in healthy elderly subjects, (O-W1)**
Katja Franke[1], Michael Ristow[2], Christian Gaser[1]
[1]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Jena, Germany, [2]Dept. of Human Nutrition, Institute of Nutrition, University of Jena, Jena, Germany

880 **Modulation of BOLD variability between brain states is influenced by age and cognitive performance**
Douglas Garrett[1], Natasa Kovacevic[2], Anthony McIntosh[1], Cheryl Grady[3]
[1]Rotman Research Institute, Baycrest; Department of Psychology, University of Toronto, Toronto, Ontario, Canada, [2]Rotman Research Institute, Baycrest, Toronto, Ontario, Canada, [3]Rotman Research Institute, Baycrest; Departments of Psychology and Psychiatry, University of Toronto, Toronto, Ontario, Canada

881 **Age-related alterations in the modular organization of structural cortical network**
Zhang Chen[1], Gaolang Gong[2], Yong He[3], Pedro Rosa-Neto[4], Alan Evans[5]
[1]Brain Imaging Center, Montreal Neurological Institute, Montreal, QC, [2]Montreal neurological institute, Montreal, Quebec, [3]State Key Labortory of Cognitive Neuroscience and Learning, Beijing, China, [4]Mcgill University, Montreal, Canada, [5]McGill University, Montreal, Canada

882 **Exploring the payback of physical fitness on the brain's architecture with VBM and DTI**
Traute Demirakca[1], Matthias Ruf[2], Mareike Unkrig[1], Gabriele Ende[1]
[1]Central Institut of Mental Health, Mannheim, Germany, [2]Central Institute of Mental Health, Mannheim, Germany

883 Multivariate pattern analysis of resting-state functional connectivity MRI predicts subject age
Koene Van Dijk[1,2], Trey Hedden[1], Randy Buckner[1,2,3], Mert Sabuncu[1]
[1]Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, [2]Center for Brain Science, Harvard University, Cambridge, MA, [3]Howard Hughes Medical Institute at Harvard University, Cambridge, MA

884 Fiber crossing consideration in DTI: age-related effect on white matter in elderly
Olivier Periot[1,2], Bassem Hiba[3], Gwénaëlle Catheline[4,2], Bixente Dilharreguy[2], Jean-François Dartigues[5], Karine Pérès[5], Michèle Allard[2,1,4]
[1]CHU de Bordeaux, Bordeaux, France, [2]Université de Bordeaux, INCIA, UMR CNRS 5287, Bordeaux, France, [3]Université de Bordeaux, RMSB, UMR CNRS 5536, Bordeaux, France, [4]EPHE, Bordeaux, France, [5]Université de Bordeaux, ISPED, INSERM U 593, Bordeaux, France

885 Persistently Variable Resting-State Functional Connectivity across Adult Lifespan
Wang Jinhui[1], Yong He[1]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

886 Correlating cortical thickness and white matter integrity in normal aging: A multimodal MRI study
Judit Haász[1], Erlend Hodneland[1], Astri Lundervold[1], Arvid Lundervold[1]
[1]University of Bergen, Bergen, Norway

887 Aging effects on the profile of recovery cycle in primary auditory cortex: An MEG study
Chia-Hsiung Cheng[1,2,3], Yung-Yang Lin[1,4,5,6,2,3,7]
[1]Institute of Brain Science, National Yang-Ming University, Taipei, Taiwan, Republic of China, [2]Laboratory of Neurophysiology, Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China, [3]Integrated Brain Research Laboratory, Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China, [4]Department of Neurology, National Yang-Ming University, Taipei, Taiwan, Republic of China, [5]Institute of Physiology, National Yang-Ming University, Taipei, Taiwan, Republic of China, [6]Institute of Clinical Medicine, National Yang-Ming University, Taipei, Taiwan, Republic of China, [7]Department of Neurology, Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China

888 Multivariate composite measures of age-related tissue properties changes
Ferath Kherif[1,2,3], Gunther Helms[4], Nikolaus Weiskopf[3], Richard Frackowiak[1,2], Bogdan Draganski[1,2,5]
[1]Département des neurosciences cliniques, CHUV, UNIL, Lausanne, Switzerland, [2]Laboratoire de recherche en neuroimagerie (LREN), Lausanne, Switzerland, [3]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom, [4]MR-Research in Neurology and Psychiatry, Universitymedicine Goettingen, Goettingen, Germany, [5]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

889 Age-related changes in the functional network underlying face processing
Hana Burianova[1,2], Yunjo Lee[3,2], Cheryl Grady[2], Morris Moscovitch[3,2]
[1]Macquarie University, Sydney, Australia, [2]Rotman Research Institute at Baycrest, Toronto, Canada, [3]University of Toronto, Toronto, Canada

890 Age-related differences in the functional neuroanatomy of episodic encoding: A joint DTI/fMRI study
Alireza Salami[1], Lars Nyberg[1], Johan Eriksson[2]
[1]Umeå University, Umeå, Sweden, [2]Umeå University

891 Differential Relationships Among White Matter Lesion Volume, Cortical Thickness, and Cognition
ELIZABETH LERITZ[1,2], David Salat[3], Victoria Williams[4], Juli Dolzhenko[4], Lewis Lipsitz[5], William Milberg[6], Regina McGlinchey[6]
[1]VA Boston Healthcare System, BOSTON, United States, [2]Brigham & Women's Hospital, Boston, MA, [3]Athinoula A. Martinos Center for Biomedical Imaging, Charlestown, United States, [4]Athinoula A. Martinos Center for Biomedical Imaging, Boston, MA, [5]Beth Israel Deaconess Medical Center, Boston, MA, [6]VA Boston Healthcare System, Boston, MA

892 Prevalence and regional distribution FLAIR lesions in Mexican-Americans: Epidemiological MRI study
Peter Kochunov[1], David Glahn[2], Anderson Winkler[2], Jack Kent[3], Ravi Duggirala[3], Jack Lancaster[1], Peter Fox[1], John Blangero[3]
[1]University Of Texas Health Science Center At San Antonio, San Antonio, United States, [2]Yale University, Hartford, CT, [3]Southwest Foundation for biomedical research, San Antonio, TX

893 Age dependent functional de-differentiation across different cognitive domains: an fMRI study
Christian Roski[1], Svenja Caspers[1], Silke Lux[2], Simon Eickhoff[3], Karl Zilles[4]
[1]Institute of Neuroscience and Medicine, INM-2, Research Center Juelich GmbH, Juelich, Germany, [2]Institute of Neuroscience and Medicine, INM-1, Research Center Juelich GmbH, Juelich, Germany, [3]Department of Psychiatry and Psychotherapy, Aachen, Germany, [4]Institute of Neuroscience and Medicine, Research Center Juelich GmbH, Juelich, Germany

894 The Relationship of rCBF Task Activation to Baseline Flow and Aging: Quantitative Xe and CASL Data
Georg Deutsch[1], Hrishikesh Deshpande[1], Beverly Corbitt[1], Jan denHollander[1]
[1]University of Alabama at Birmingham, Birmingham, AL, USA

895 Cardiovascular Risk and Longitudinal Changes in Resting Brain Function
Lori Beason-Held[1], Madhav Thambisetty[1], Gerard Deib[2], Jitka Sojkova[1], Bennett Landman[3], Alan Zonderman[1], Luigi Ferrucci[1], Michael Kraut[2], Susan Resnick[4]
[1]National Institute on Aging, NIH, Baltimore, MD, [2]Johns Hopkins University School of Medicine, Baltimore, MD, [3]Vanderbilt University, Nashville, TN, [4]National Institute of Aging, NIH, Baltimore, MD

896 Impact of dietary interventions on resting state functional connectivity in healthy elderly subjects
Veronica Witte[1], Daniel Margulies[2], Lucia Kerti[1], Henrike Rupp[1], Jochen Fiebach[3], Agnes Flöel[1]
[1]Neurology, Charite University Berlin, Berlin, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]Center for Stroke Research and Dept. Neurology, Charité, Berlin, Germany

897 Regional diffusivity changes in the fornix – correlation with hippocampal volumes and age
David Chen[1], Danielle DeSouza[2], Udi Blankstein[3], Karen Davis[3], Mojgan Hodaie[4]
[1]Division of Neurosurgery, University of Toronto, Toronto, Canada, [2]Institute of Medical Science, University of Toronto, Toronto, Canada, [3]Toronto Western Hospital, Toronto, Canada, [4]Division of Neurosurgery and Institute of Medical Science, University of Toronto, Toronto, Canada

898 Neuroimaging of aging: links between cardiovascular health, cerebral hemodynamics and cognition
Claudine Gauthier[1,2], Muriel Lefort[3], Cécile Madjar[2], Laurence Desjardins-Crépeau[4,2], Said Mekary[5,2], Nadjia Kachenoura[3], Olivier Dupuy[5,6], Alban Redheuil[3], Frédérique Frouin[3], Louis Bherer[4,2], Richard Hoge[1,2]
[1]Université de Montréal, Physiology/Biomedical Engineering Department, Montreal, Canada, [2]CRIUGM, Montreal, Canada, [3]Inserm 678, UPMC, CHU Pitié Salpêtrière, Paris, France, [4]Université du Québec à Montréal, Montreal, Canada, [5]Université de Montréal, Montreal, Canada, [6]Faculté des sciences du sport, Université de Poitiers., Poitiers, France

899 Educational/Occupational Attainment is Positively Correlated with WM Integrity in Healthy Seniors
Nathan Johnson[1], Brian Gold[1,2,3], Chobok Kim[1], Cilles Sara[1]
[1]Department of Anatomy and Neurobiology, University of Kentucky, Lexington, KY, [2]Magnetic Resonance Imaging and Spectroscopy Center, Lexington, KY, [3]Sanders-Brown Center on Aging, Lexington, KY

900 Aging-related decline of paired-pulse inhibition on the neuromagnetic somatosensory responses
Chia-Hsiung Cheng[1,2,3], Yung-Yang Lin[1,4,5,6,2,3,7]
[1]Institute of Brain Science, National Yang-Ming University, Taipei, Taiwan, Republic of China, [2]Laboratory of Neurophysiology, Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China, [3]Integrated Brain Research Laboratory, Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China, [4]Department of Neurology, National Yang-Ming University, Taipei, Taiwan, Republic of China, [5]Institute of Physiology, National Yang-Ming University, Taipei, Taiwan, Republic of China, [6]Institute of Clinical Medicine, National Yang-Ming University, Taipei, Taiwan, Republic of China, [7]Department of Neurology, Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China

901 Verbal fluency performances underpinned by white matter alterations in a healthy elderly population
amandine pelletier[1,2], Bixente Dilharreguy[1], Michèle Allard[1,2], Olivier Periot[1], Karine Pérès[3], Amiéva Hélène[3], Jean-François Dartigues[3], Gwénaëlle Catheline[1,2]
[1]Université de Bordeaux, INCIA, CNRS UMR 5287, Bordeaux, France, [2]EPHE, Bordeaux, France, [3]ISPED, INSERM U 897, Bordeaux, France

902 Task Effects on Resting-State Functional Connectivity Dynamics in the Default Network of Old Adults
Omer Grigg[1], Cheryl Grady[1]
[1]Rotman Research Institute, Toronto, Canada

903 Age-Related Changes in White Matter Microstructure and the Effect on Language Functioning
Kiely Donnelly[1], Jane Allendorfer[2], Judd Storrs[1], Christi Banks[3], Scott Holland[4], Jerzy Szaflarski[2]
[1]University of Cincinnati, [2]University of Cincinnati, Cincinnati, United States, [3]University of Cincinnati Academic Health Center, Cincinnati, OH, [4]Cincinnati Children's Hospital, University of Cincinnati, Cincinnati, United States

904 Comparison of two approaches to the resting state: spatial ICA and EEG alpha-band correlates
Makoto Miyakoshi[1], Satoru Miyauchi[2], Takahiko Koike[2], Shigeyuki Kan[2], Toshiharu Nakai[1]
[1]National Center for Geriatrics and Gerontology, Ohbu, Japan, [2]National Institute of Information and Communications Technology, Kobe, Japan

905 Effects of age and gender on neuroanatomical volumes
Sachiko Inano[1], Hidemasa Takao[1], Naoto Hayashi[1], Naoki Yoshioka[1], Kuni Ohtomo[1]
[1]University of Tokyo, Tokyo, Japan

906 Flexibility of adaptive mechanisms of cognitive reserve in normal aging
Jennyfer Ansado[1], Oury Monchi[2], Nourane Ennabil[3], Yves Joanette[4]
[1]Faculty of medicine, Université de Montréal & Université de Nice-Sophia Antipolis, Montreal, CANADA & Nice, FRANCE, [2]University of Montreal, Montreal, Canada, [3]Faculty of medicine, Université de Montréal, Montreal , Canada, [4]Faculty of medicine, Université de Montréal, Montreal, Canada

907 Age sculpts brain signal complexity in human auditory and visual systems
Andreea Oliviana Diaconescu[1], Natasa Kovacevic[1], Anthony McIntosh[1]
[1]Rotman Research Institute, Toronto, Canada

908 Age-related changes in functional connectivity predict performance on a delayed-recognition task
Jason Steffener[1], Christian Habeck[1], Yaakov Stern[1]
[1]Columbia University, New York, NY

909 Age-related changes in whole-brain functional connectivity resting-state networks
S.H. Annabel Chen[1], Rui-Ping Lua[1], Makoto Miyakoshi[2], Chiao-Yi Wu[1], Kayako Matsuo[3], Keren E[1], M-H Ringo Ho[1], Atsunobu Suzuki[4], W-Y Isaac Tseng[3], Toshiharu Nakai[2]
[1]Nanyang Technological University, Singapore, [2]Functional Brain Imaging Lab NCGG, Ohbu, Aichi, Japan, [3]National Taiwan University, Taipei, Taiwan, [4]Nagoya University, Nagoya, Aichi, Japan

910 Traumatic Lifetime Stress and Frontostriatal Hypometabolism in normal elderly people
Heyeon Park[1], Sang Soo Cho[2], Sang Eun Kim[2], Jeanyung Chey[1]
[1]Department of Psychology, Seoul National University, Seoul, Republic of Korea, [2]Department of Nuclear Medicine, Seoul National University College of Medicine, Seoul, Republic of Korea

911 Functional MRI entropy measurements of age-related brain changes
Moses Sokunbi[1], Roger Staff[2], Gordon Waiter[1], George Cameron[1], Trevor Ahearn[1], Alison Murray[1]
[1]Aberdeen Biomedical Imaging Centre, University of Aberdeen, Aberdeen, United Kingdom, [2]Aberdeen Royal Infirmary, Aberdeen, United Kingdom

912 Estradiol reversal of anticholinergic-related brain activation in postmenopausal women
Julie Dumas[1], Julia Johnson[2], Amanda Kutz[3], Magdalena Naylor[3], Paul Newhouse[1]
[1]University of Vermont, [2]University of Massachusetts School of Medicine, Worcester, MA, [3]University of Vermont, Burlington, VT

913 Automatic Measurement of Periventricular Halo In An Elderly Cohort
Nazahah Mustafa[1], Trevor Ahearn[1], Gordon Waiter[2], George Cameron[1], Sima Salarirad[2], Alison Murray[1]
[1]Aberdeen Biomedical Imaging Centre, Aberdeen, United Kingdom, [2]University of Aberdeen, Aberdeen, United Kingdom

914 The impact of blue light on non-visual brain functions changes with age
Véronique Daneault[1,2], Gilles Vandewalle[1,2], Marc Hébert[3], Julien Doyon[1,4], Marie Dumont[2], Julie Carrier[1,2,4]
[1]Functional Neuroimaging Unit, University of Montreal Geriatric Institute, Montreal, Quebec, Canada, [2]Center for Advanced Research in Sleep Medicine, Hôpital du Sacré-Cœur de Montréal, Montréal, Québec, Canada, [3]Centre de recherche Université Laval Robert-Giffard, Québec, Canada, [4]Centre de recherche en neuropsychologie et en cognition, Department of Psychology, University of Montreal, Montréal, Québec, Canada

915 Aging of the alpha response function: an EEG/fMRI study
Jan De Munck[1], Roberto Mamoliti[2], Sonia Goncalves[3], Gert Kwakkel[4], Ruud Verdaasdonk[4], Fernando Lopes da Silva[5], Erwin Van Wegen[4]
[1]Amsterdam, Netherlands, [2]Centro Sclerosi Multipla, Cagliari, Italy, [3]Coimbra Academic Hospitals, Coimbra, Portugal, [4]VU University Medical Center, Amsterdam, Netherlands, [5]University of Amsterdam, Amsterdam, Netherlands

916 Elderly bilinguals dinamically disengage right frontal activity for efficient interference control
Daniel Adrover-Roig[1], Pierluc Massicotte[2], Nicole Caza[2], Ana Inés Ansaldo[2]
[1]Centre de Recherche de l'Institut Universitaire de Gériatrie de Montréal, [2]CRIUGM, Montreal, Canada

917 Age-related differences in the neural processing of emotional stimuli: A midlife crossroads?
Eric Allard[1], Elizabeth Kensinger[1]
[1]Boston College, Chestnut Hill, MA

918 Neural signatures of cognition in aging across multiple imaging modalities
Jason Steffener[1], Adam Brickman[1], Christian Habeck[1], Timothy Salthouse[2], Yaakov Stern[1]
[1]Columbia University, New York, NY, [2]University of Virginia, Charlottesville, VA

919 Effects of age on BOLD response during performing Negative Priming tasks
Gebhard Sammer[1], Eva Bauer[1], Miriam Prager[1], Nadja Stein[1], Helge Gebhardt[1], Bernd Gallhofer[1]
[1]University of Gießen, Giessen, Germany

920 The Relationship between Cognitive Reserve and measures of DTI in Older Healthy Subjects
Joanna Connolly[1], David Delany[2], Jonathan McNulty[3], Richard Roche[4], Joshua Balsters[5], Arun Bokde[6]
[1]Institute of Neuroscience, Trinity College Dublin, Ireland, [2]6 Centre for Academic Practice and Student Learning, Trinity College Dublin, Dublin, Ireland, [3]School of Medicine and Medical Science, University College Dublin, Dublin, Ireland, [4]4 Department of Psychology, National University of Ireland – Maynooth, Kildare, Ireland, [5]Dublin, Ireland, [6]Trinity College Dublin, Dublin, Ireland

921 Age-Related Preferences toward Affective Stimuli in an Oddball Task: Positivity Preference in Older
Juan Li[1], Jing Yu[1]
[1]Institute of Psychology, Chinese Academy of Sciences, Beijing, China

922 Training attentional control in normal aging: an fMRI study
Sylvie Belleville[1], Bianca Bier[2], Chloé DeBoysson[2], Jean-Francois Demonet[3], Samira Mellah[2]
[1]Centre de recherche de l'Institut universitaire de gériatrie de Montréal and Université de Montréal, Montreal, Quebec, [2]Institut Universitaire de Gériatrie de Montréal, Montreal, Canada, [3]INSERM, Toulouse, France

923 Age Effect on Cerebral Blood Flow in Adults Using Pseudo-Continuous ASL
Kazushi Suzuki[1,2], Yuri Koide[2], Wataru Gonoi[3], Toshihiro Hayashi[4,2], Kenichi Aizawa[1], Kurumi Fujii[2], Masaki Katsura[3], Shinya Kodashima[1], Yoshiko Mizuno[1], Tomoko Nakao[1], Yumiko Oike[1], Toru Suzuki[1], Shoji Tsuji[2], Tsutomu Yamazaki[1], Akira Kunimatsu[3], Atsushi Iwata[4,2]
[1]Center for Epidemiology and Preventive Medicine, University of Tokyo Hospital, Tokyo, Japan, [2]Department of Neurology, University of Tokyo School of Medicine, Tokyo, Japan, [3]Department of Radiology, University of Tokyo School of Medicine, Tokyo, Japan, [4]Department of Molecular Neuroscience on Neurodegeneration, University of Tokyo School of Medicine, Tokyo, Japan

Neuroanatomy

Anatomy and Function

924* Clear Tonotopic Maps in Human Auditory Cortex measured with 7T fMRI, (O-Th3)
Sandra Da Costa[1], Wietske van der Zwaag[2], José Marques[2], Richard Frackowiak[3], Stephanie Clarke[4], Melissa Saenz[1]
[1]LREN Neuroimaging Research Lab, Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne, Switzerland, [2]University of Lausanne, Lausanne, Switzerland, [3]Department of Clinical Neuroscience, Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne, Switzerland, [4]CHUV, Lausanne, Switzerland

925* Task-based functional connectivity of two cytoarchitectonic visual areas on the human fusiform gyrus, (O-T2)
Julian Caspers[1], Karl Zilles[2], Katrin Amunts[3], Simon Eickhoff[4]
[1]C.&O. Vogt Institute for Brain Research, University of Düsseldorf, Düsseldorf, Germany, [2]Institute of Neuroscience and Medicine, Jülich, Germany, [3]Research Center Juelich, INM-1, Jülich, Germany, [4]Department of Psychiatry and Psychotherapy, Aachen, Germany

926 Structure and Function of the Subthalamic Nucleus**
Birte Forstmann[1], Sara Jahfari[2], Max Keuken[1], Jane Neumann[3], Andreas Schaefer[4], Alfred Anwander[5], Robert Turner[5]
[1]University of Amsterdam, Amsterdam, Netherlands, [2]University Of Amsterdam, Netherlands, [3]Max-Planck-Institute for Human Cognitive and Brain Science., Leipzig, Germany, [4]Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [5]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

927 The human insula: multiarchitectonic organization and correlation with MR imaging
David Gallay[1], Marc Gallay[1], Angelika Baechler[1], Michael Wyss[2], Anne Morel[1]
[1]Center for Clinical Research, University Hospital Zurich, Zurich, Switzerland, [2]Institute for Biomedical Ingeneering, University Hospital Zurich, Zurich, Switzerland

928 Ultra-high field FMRI of the human amygdala. Parcellation of emotional human non-linguistic sounds
Eugenia Solano-Castiella[1], Bibek Dhital[1], Domenica Wilfling[1], Tom Fritz[1], Paul Schmude[1], Erik Türke[1], Enrico Reimer[1], Andreas Schäfer[1], Robert Trampel[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

929 On the role of the anterior prefrontal cortex in complex cognitive "branching" tasks: An fMRI study
Oliver Gruber[1], Alexandra Tinnermann[1], Esther Diekhof[1]
[1]Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Göttingen, Germany

930 Lateralization of Working Memory Related Activity in the Cerebellum
Christina Ledbetter[1], James Patterson[1]
[1]LSUHSC, Shreveport, LA

931 Statistical analysis of hippocampal volumes shows similar variance throughout adult life
Abderazzak Mouiha[1], Anna Caroli[2], Giovanni Frisoni[2], Simon Duchesne[1,3]
[1]Centre de recherche Universite Laval Robert-Giffard, Quebec, Canada, [2]LENITEM, Brescia, Italy, [3]Université Laval, Quebec, Canada

932 Postcentral Sulcus and Somatosensory Cortex: Anatomical-Functional Relationship
Veronika Zlatkina[1], Jurgen Germann[1], Michael Petrides[1]
[1]Montreal Neurological Institute, Montreal, Canada

933 Segmentation of Corpus Callosum Using Diffusion Tensor Tractography with Intrinsic Activated Regions
Jun-Cheng Weng[1,2], Yu-Ting Ke[1], Chun-Che Lo[1], Chia-Lin Chen[1,2]
[1]School of Medical Imaging and Radiological Sciences, Chung Shan Medical University, Taichung, Taiwan, [2]Department of Medical Imaging, Chung Shan Medical University Hospital, Taichung, Taiwan

934 7T Microstructural MR Mapping of the Border between Primary Motor and Somatosensory Cortex in Humans
Stefan Geyer[1], Marcel Weiss[1], Katja Reimann[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Dept. Neurophysics, Leipzig, Germany

935 Segregation of cerebro-thalamo-cerebellar sensorimotor networks defined by rs-fcMRI
Judy Kipping[1], Wolfgang Grodd[2], Arno Villringer[1], Daniel Margulies[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Department of Psychiatry, Psychotherapy and Psychosomatics, University Hospital Aachen, Aachen, Germany

936 Entorhinal Verrucae Geometry is Coincident and Correlated with Entorhinal Island Contrast
Kristen Huber[1], Gheorghe Postelnicu[2,1], Ruopeng Wang[1], Sita Kakunoori[1], Andre van der Kouwe[1], Matthew Frosch[3], Thor Stein[3], Bruce Fischl[1,4], Jean Augustinack[1]
[1]MGH/MIT/HMS Athinoula A. Martinos Center for Biomedical Imaging, Charlestown, MA, [2]Google, Inc., Zurich, Switzerland, [3]Department of Neuropathology, MGH, Boston, MA, [4]CSAIL/HST, MIT, Cambridge, MA

937 The WU-Minn Human Connectome Project Consortium
David Van Essen[1], Kamil Ugurbil[2]
[1]Washington University, St. Louis, MO, [2]University of Minnesota, Minneapolis, MN

938 Joining Volume and Surface Representations of fMRI Data
Virgile Fritsch[1,2], Bertrand Thirion[1,2]
[1]Inria, Orsay, France, [2]CEA, I²BM, Neurospin, Saclay, France

939 The Effects of BDNF Val66Met and Childhood Trauma on Brain Morphometry in Healthy Volunteers
Courtney Gallen[1], Xiaochu Zhang[2], Xiujuan Geng[3], Pradeep Kurup[1], Thomas Ross[1], Colin Hodgkinson[4], David Goldman[4], Mary-Anne Enoch[4], Elliot Stein[1], Mary Lee[1]
[1]NIDA-IRP, NIH, Baltimore, United States, [2]USTC, Hefei, China, [3]University of North Carolina, Chapel Hill, United States, [4]NIAAA-IRP, NIH, Rockville, United States

940 A Structural and Diffusion Anatomical Study of the Aqueduct of Sylvius and Cerebrospinal Fluid
Patrick Schweder[1], Louisa Gill[1], Peter Hansen[2], Alexander Green[1], Tipu Aziz[1]
[1]University of Oxford, Department of Neurosurgery, Oxford, United Kingdom, [2]University of Oxford, Department of Physiology, Anatomy and Genetics, Oxford, United Kingdom

941 The Multivariate Relation of Brain Structure and Cognitive Performance in Healthy Children
Gabriel Ziegler[1], Rachel Yotter[1], Christian Gaser[1]
[1]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Jena, Germany

942 Temporal Pole Subregions are Functionally Linked to Distinct Brain Networks
Belen Pascual[1], Joseph Masdeu[2], Mark Hollenbeck[1], Bradford Dickerson[1]
[1]Massachusetts General Hospital, Boston, MA, [2]National Institutes of Health, Bethesda, DC

943 The relationship between structural brain features and trait impulsivity in healthy individuals
Eliza Congdon[1], Jessica Cohen[2], Adriana Galvan[1], Akram Bakour[3], Jeanette Mumford[3], Edythe London[1], Russell Poldrack[4]
[1]University of California Los Angeles, Los Angeles, CA, United States, [2]University of California Berkeley, Berkeley, CA, United States, [3]University of Texas at Austin, Austin, TX, United States, [4]University of Texas at Austin, Austin, CA, United States

944 Cerebral structural development of the hand areas of handicapped children using sequential MRI
Yumi Okoshi[1], Toshinori Kato[2]
[1]Tobu Rehabilitation Center, Tokyo, Japan, [2]KATOBRAIN CO.,LTD., Tokyo, Japan

Neuroanatomy

White Matter Anatomy, Fiber Pathways and Connectivity

945 ** **Standardized parieto-frontal connectivity map obtained with cortico-cortical evoked potentials**
Riki Matsumoto[1], Tomoyuki Fumuro[1], Dileep Nair[2], Akio Ikeda[1], Eric LaPresto[2], Nobuhiro Mikuni[3], Susumu Miyamoto[4], William Bingaman[2], Hidenao Fukuyama[5], Ryosuke Takahashi[1], Imad Najm[2], Hiroshi Shibasaki[6], Hans Lüders[7]
[1]Dept. Neurology, Kyoto University Graduate School of Medicine, Kyoto, Kyoto, [2]Epilepsy Center, Cleveland Clinic, Cleveland, OH, [3]Dept. Neurosurgery, Sapporo Medical University, Sapporo, Hokkaido, [4]Dept. Neurosurgery, Kyoto University Graduate School of Medicine, Kyoto, Kyoto, [5]HBRC Kyoto University School Of Medicine, Kyoto, Japan, [6]Dept. Neurology, Takeda General Hospital, Kyoto, Kyoto, [7]Epilepsy Center, Case Western Reserve University, Cleveland, OH

946 ** **FIBRATLAS: a method for cerebral white matter tracts dissection monitoring and 3D reconstruction**
Ilyess Zemmoura[1,2,3], Barthélémy Serres[4], Frederic Andersson[5], Clovis Tauber[3], Gilles Venturini[4], Christophe Destrieux[3,2,1]
[1]CHRU de Tours, Service de Neurochirurgie, Tours, France, [2]Laboratoire d'Anatomie, Université François Rabelais de Tours, Tours, France, [3]UMR_S Imagerie et Cerveau, Inserm U 930, CNRS ERL 3106, Université François Rabelais de Tours, Tours, France, [4]EA2101, Laboratoire d'informatique, Université François Rabelais de Tours, Tours, France, [5]IFR135 Imagerie fonctionnelle, Tours, France

947 Heritability and reliability of the Human Connectome mapped using 4T HARDI in 156 young adult twins
Neda Jahanshad[1], Katie McMahon[2], Greig de Zubicaray[3], Nicholas Martin[4], Margaret Wright[4], Arthur Toga[1], Paul Thompson[1]
[1]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [2]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [3]University of Queensland, School of Psychology, Brisbane, Australia, [4]Queensland Institute of Medical Research, Brisbane, Australia

948 ** **TBSS of the Neonatal Brain: Depiction of Specific Neural Phenotypes**
Rafael Ceschin[1], Natasha Lepore[2], Marvin Nelson[3], Ashok Panigrahy[4]
[1]Radiology, Children's Hospital of Pittsburgh, Pittsburgh, PA, United States, [2]Department of Radiology, University of Southern California and Children's Hospital Los Angeles, Los Angeles, CA, [3]4Department of Radiology, University of Southern California and Children's Hospital Los Angeles, Los Angeles, CA, [4]Children's Hospital of Pittsburgh, UPMC, Pittsburgh, PA

949* **Functional Zones within the Human Subthalamic Nucleus, (O-T2)**
Christian Lambert[1], Ludvic Zrinzo[2], Zoltan Nagy[1], Antoine Lutti[1], Marwan Hariz[2], Thomas Foltynie[2], Bogdan Draganski[3], John Ashburner[1], Richard Frackowiak[3]
[1]Wellcome Trust Centre for Neuroimaging, London, United Kingdom, [2]UCL Institute of Neurology, London, United Kingdom, [3]Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland

950 **The Perforant Tract in the Human Brain revealed by 3D-Polarized Light Imaging**
David Graessel[1], Markus Axer[1], Melanie Kleiner[1], Timo Dickscheid[1], Timo Huetz[1], Julia Reckfort[1], Jürgen Dammers[2], Uwe Pietrzyk[2], Karl Zilles[3], Katrin Amunts[1]
[1]Institute of Neuroscience and Medicine (INM-1), Research Centre Juelich, Juelich, Germany, [2]Institute of Neuroscience and Medicine (INM-4), Research Centre Juelich, Juelich, Germany, [3]Institute of Neuroscience and Medicine (INM-2), Research Centre Juelich, Juelich, Germany

951 **Histological Evidence of Complex White Matter Architecture in the Human Brain: Significance for DTI**
Jacopo Annese[1], Paul Maechler[1], Natalie Schenker[1]
[1]University of California, San Diego, San Diego, CA

952 **Tract length and microstructure variability: implications for conduction delays in neuroimaging**
John Griffiths[1], Lorraine Tyler[2]
[1]University of Cambridge, Cambridge, United Kingdom, [2]University Of Cambridge, Cambridge, United Kingdom

953 **A new quantitative MRI contrast for measuring white matter myelin**
Aviv Mezer[1], Nikola Stikov[2], Kendrick Kay[1], Robert Dougherty[1], Josef Parvizi[1], Jason Yeatman[1], Kim Butts-Pauly[1], Brian Wandell[1]
[1]Stanford University, Stanford, United States, [2]McGill University, Montreal, Canada

954 **White Matter Structural Connectivity without Diffusion Tensor Imaging**
Seung-Goo Kim[1], Moo K. Chung[2], Jamie Hanson[3], Brian Avants[4], James Gee[5], Richard J. Davidson[2], Seth Pollak[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]University of Wisconsin, Madison, WI, [3]University of Wisconsin-Madison, Madison, WI, [4]University of Pennsylvania, Philadelphia, United States, [5]University of Pennsylvania, Philadelphia, PA

955 **Altered Global and Local Network Topology in 22q11DS: A Graph Theoretical Study**
Marie-Christine OTTET[1,2], Marie Schaer[2], Leila Cammoun[3], Jean-Philippe Thiran[3], Stephan Eliez[4]
[1]University of Geneva, Switzerland, [2]Office Médico-Pédagogique Research Unit, Department of Psychiatry, Geneva, Switzerland, [3]EPFL, Lausanne, Switzerland, [4]Office Médico-Pédagogique Research Unit, Department of Psychiatry, University of Geneva, Geneva, Switzerland

956 **Subcortical Connections in the Internal Capsule of a Macaque**
Kyle Taljan[1,2], Cameron McIntyre[1], Ken Sakaie[1]
[1]Cleveland Clinic, Cleveland, OH, USA, [2]Cleveland State University, Cleveland, OH, USA

957 **Temporo-Frontal Compartments of the Arcuate Fasciculus**
Nina Dronkers[1], And Turken[2], Paule Toussaint[3], Odile Plaisant[4]
[1]VA Northern California Health Care System/UC Davis, Martinez, United States, [2]VA Northern California Health Care System, Martinez, CA, [3]LIF, GHU Pitie-Salpetriere, UPMC, INSERM, Paris, France, [4]University of Paris Descartes/GH Pitié Salpêtrière, Epilepsy Unit and Pain Centre, Paris, France

958 **Probabilistic fibre tract analysis of human inferior parietal areas reveals similarities to macaques**
Svenja Caspers[1], Simon Eickhoff[2], Tobias Rick[3], Anette von Kapri[3], Torsten Kuhlen[3], Ruiwang Huang[4], Nadim Shah[5], Karl Zilles[6]
[1]Institute of Neuroscience and Medicine, INM-2, Research Center Julich, Julich, Germany, [2]Department of Psychiatry and Psychotherapy, Aachen, Germany, [3]Institute for Scientific Computing, Virtual Reality Group, RWTH Aachen University, Aachen, Germany, [4]Center for the Study of Applied Psychology and Imaging Center for Brain Research, SCNU, Guangzhou, China, [5]Institute of Neuroscience and Medicine, INM-4, Research Centre Julich, Julich, Germany, [6]Institute of Neuroscience and Medicine, INM-2, Research Centre Julich, Julich, Germany

959 **Measures of brain size as proxies for inter-hemispheric connection length**
John Lewis[1], Vladimir Fonov[1], Rebecca Theilmann[2], Jeanne Townsend[2], Alan Evans[1]
[1]Montreal Neurological Institute, Montreal, Canada, [2]University of California, San Diego, La Jolla, CA

960 **Anatomic Connectivity Metrics: Track Counts Versus Tissue Integrity**
Ken Sakaie[1], Robert Bermel[1], Lael Stone[1], Micheal Phillips[1], Mark Lowe[1]
[1]Cleveland Clinic, Cleveland, OH, United States

961 **White Matter Differences between Deaf ASL Signers and Hearing English Speakers**
Rosalia Tungaraza[1], Sonya Mehta[1], Karen Emmorey[2], Thomas Grabowski[1]
[1]Integrated Brain Imaging Center, Department of Radiology, University of Washington, Seattle, United States, [2]Laboratory for Language and Cognitive Neuroscience, San Diego State University, San Diego, United States

962 **A Fiber Navigator for Neurosurgical Planning**
Olivier Vaillancourt[1], Arnaud Boré[1], Gabriel Girard[1], Maxime Descoteaux[1]
[1]MOIVRE center, Université de Sherbrooke, Sherbrooke, Canada

963 Independent Component Analysis of DTI Reveals Microstructural Correlations of Human Brain
Yiou Li[1], Fan-Pei Yang[1], Christopher Nguyen[2], Shelly Cooper[1], Sara LaHue[1], Sandya Venugopal[1], Pratik Mukherjee[1]
[1]University of California San Francisco, San Francisco, United States, [2]University of California Los Angeles, Los Angeles, United States

964 White-matter Organization after Early Deafness revealed by Magnetization Transfer Imaging
Martha Shiell[1,2], François Champoux[3], Bruce Pike[1], Robert Zatorre[1,2,4]
[1]Montreal Neurological Institute, McGill University, Montreal, Canada, [2]BRAMS, Montreal, Canada, [3]Université de Montréal, Montreal, Canada, [4]CIRMMT, Montreal, Canada

965 White Matter Connectivity in Bilaterally Deaf Individuals vs. Hearing Controls
Therese Chevalier[1], Manohar Bance[2], Vanessa Lim[3], Heather Maessen[4], Aaron Newman[2]
[1]Dalhousie University, [2]Dalhousie University, Halifax, Canada, [3]University of Aukland, Aukland, New Zealand, [4]Nova Scotia Hearing and Speech, Halifax, Canada

966 Preferential Posterior Damage of Central Visual Pathways in Children with PVL
Rafael Ceschin[1], Arabhi Nagasunder[2], Natasha Lepore[3], Marvin Nelson[4], Stefan Bluml[5], Ashok Panigrahy[6]
[1]Radiology, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA, United States, [2]Radiology, Children's Hospital Los Angeles, Los Angeles, CA, [3]Department of Radiology, University of Southern California and Children's Hospital Los Angeles, Los Angeles, CA, [4]4Department of Radiology, University of Southern California and Children's Hospital Los Angeles, Los Angeles, CA, [5]Radiology, Childrens Hospital Los Angeles, Los Angeles, CA, [6]Children's Hospital of Pittsburgh, UPMC, Pittsburgh, PA

967 Plasticity of the superior and middle cerebellar peduncles in musicians revealed by DTI
Ihssan Abdul-Kareem[1], Jamaan AlGhamdi[1], Andrej Stancak[1], Laura Parkes[2], Vanessa Sluming[1]
[1]Magnetic Resonance and Image Analysis Research Centre, University of Liverpool, LIVERPOOL, United Kingdom, [2]Department of Imaging Science and Biomedical Engineering, University of Manchester, Manchester, United Kingdom

968 Isotropic High Resolution Diffusion Imaging of the Human Habenula in vivo at 7T
Barbara Strotmann[1], Alfred Anwander[1], Robin Heidemann[1], Eugenia Solano-Castiella[1], Arno Villringer[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

969 Changes in Brain Functional Connectivity Precede changes in Structural Connectivity
Pawel Skudlarski[1,2], Leslie Wolfson[3], Michael Stevens[4], Godfrey Pearlson[5,2]
[1]Hartford Hospital/IOL, Hartford, CT, [2]Yale School of Medicine, New Haven, CT, [3]University of Connecticut/ Hartford Hospital, Hartford, CT, [4]Olin Neuropsychiatry Research Center, Hartford, United States, [5]Hartford Hospital, Hartford, CT

970 A novel thalamo-cortical tracts atlas to quantify connectivity damage after traumatic brain injury
Letizia Squarcina[1], Alessandra Bertoldo[1], David Sharp[2]
[1]University of Padova, Department of Information Engineering, Padova, Italy, [2]The Division of Experimental Medicine, Imperial College London, London, United Kingdom

971 Sexual dimorphism in corpus callosum microstructure: a critical re-evaluation
Rene Westerhausen[1], Kristiina Kompus[1], Margaretha Dramsdahl[1], Liv Falkenberg[1], Renate Grüner[2], Helene Hjelmervik[1], Karsten Specht[3], Kerstin von Plessen[4], Kenneth Hugdahl[5]
[1]University of Bergen, Bergen, Norway, [2]Haukeland University Hospital, Bergen, Norway, [3]Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway, [4]University of Copenhagen, Copenhagen, Denmark, [5]Division of Psychiatry and Bergen Mental Health Center, Haukeland University Hospital, Bergen, Norway

972 Involvement of the corpus callosum in rare motor neuron disorders, as assessed by DTI
Alexander Unrath[1], Hans-Peter Müller[1], Albert Ludolph[1], Jan Kassubek[1]
[1]University of Ulm, Ulm, Germany

973 Diffusion Tensor Imaging Reveals Structural Connectivity between Human Auditory and Visual Cortex
Anton Beer[1], Tina Plank[1], Mark Greenlee[1]
[1]Universität Regensburg, Regensburg, Germany

974 Right and left temporoparietal junctions exhibit different structural connectivity profiles
Aaron Kucyi[1], Massieh Moayedi[2], Irit Weissman-Fogel[3], Karen Davis[4]
[1]University of Toronto, [2]University of Toronto, Toronto, Canada, [3]Toronto Western Research Institute, University Health Network, Toronto, Ontario, [4]Toronto Western Hospital, Toronto, Canada

975 Measurement of Callosal Motor Fiber Location Related Foot Movement in the Human Brain Using DTT-fMRI
Dong Hoon Lee[1], Cheol Pyo Hong[1], Woo Ho Shin[1], Sung Ho Jang[2], Ji Won Park[3]
[1]Department of Radiological Science, College of Health Science, Yonsei University, Wonju, Gangwondo, Korea, Republic of, [2]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of, [3]Department of Physical Therapy, College of Health Science, Catholic University of Daegu, Daegu, Korea, Republic of

976 Lateralization of white matter diffusion within arcuate fasciculus fiber bundles
Ralph Suarez[1], Michael Paldino[1], Simon Warfield[1]
[1]Children's Hospital Boston, Harvard Medical School, Boston, MA

977 Leptin-dependent correlations between gray and white matter structure in obese and lean women
Karsten Mueller[1], Annette Horstmann[1], Harald Möller[1], Alfred Anwander[1], Matthias Schroeter[1], Joeran Lepsien[1], Arno Villringer[1], Burkhard Pleger[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

978 DTI measures in motor and cognitive pathways differ between MS and controls
Katherine Koenig[1], Erik Beall[2], Jian Lin[2], Blessy Mathew[2], Lael Stone[3], Stephen Rao[2], Robert Bermel[3], Micheal Phillips[2], Mark Lowe[2], Steven Jones[2]
[1]Cleveland Clinic, Cleveland, United States, [2]Cleveland Clinic, Cleveland, OH, [3]The Cleveland Clinic, Cleveland, OH

979 Location and Symmetry Evaluation of Hand Motor Corticospinal Tract in the Corona Radiata
Dong Hoon Lee[1], Cheol Pyo Hong[1], Woo Ho Shin[1], Sung Ho Jang[2], Ji Won Park[3]
[1]Department of Radiological Science, College of Health Science, Yonsei University, Wonju, Gangwondo, Korea, Republic of, [2]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of, [3]Department of Physical Therapy, College of Health Science, Catholic University of Daegu, Daegu, Korea, Republic of

980 DTI measures in posterior cinguate and entorhinal cortex correlate with performance on the PASAT
Katherine Koenig[1], Jian Lin[2], Ken Sakaie[3], Stephen Rao[2], Bruce Trapp[2], Mark Lowe[2], Micheal Phillips[2]
[1]Cleveland, United States, [2]Cleveland Clinic, Cleveland, OH, [3]Cleveland Clinic, CLEVELAND, OH

981 Voxel-Based Analysis by DTI Imaging on Major Depression in Young Adults
Nianming Zuo[1], Jiliang Fang[2], Yang Hong[2], Tao Li[3], Xueyu Lv[3], Haibing Tong[2], Xiaoling Wang[2], Weidong Wang[3], Yuan Zhou[4], Tianzi Jiang[5]
[1]NLPR&LIAMA, Institute of Automation, Chinese Academy Of Science, Beijing, China, [2]Department Of Radiology, Guang'anmen Hospital, China Academy of Chinese Medical Sciences, Beijing, China, [3]Department Of Psychology, Guang'anmen Hospital, China Academy of Chinese Medical Sciences, Beijing, China, [4]Institute of Psychology, Chinese Academy of Sciences, Beijing, China, [5]Institute Of Automation, Chinese Academy Of Sciences, Beijing, China

982 A DTI-based Study in Long-term Meditators
Eileen Luders[1], Kristi Clark[1], Katherine Narr[1], Arthur Toga[1]
[1]UCLA School of Medicine, Department Of Neurology, Los Angeles, United States

983 Anatomical Location and Angle Measurements of Corticospinal Tract in the Internal Capsule
Dong Hoon Lee[1], Cheol Pyo Hong[1], Woo Ho Shin[1], Sung Ho Jang[2], Ji Won Park[3]
[1]Department of Radiological Science, College of Health Science, Yonsei University, Wonju, Gangwondo, Korea, Republic of, [2]Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of, [3]Department of Physical Therapy, College of Health Science, Catholic University of Daegu, Daegu, Korea, Republic of

Perception and Attention

Attention: Auditory/Tactile/Motor

984 Top-down controlled alpha band activity in somatosensory areas determines discrimination performance
Saskia Haegens[1], Ole Jensen[1]
[1]Radboud University Nijmegen, Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands

985 Rapid tuning of non-primary auditory cortex neurons supports selective listening in humans
Jyrki Ahveninen[1], Matti Hämäläinen[1], Iiro Jääskeläinen[2], Seppo Ahlfors[1], Samantha Huang[1], Fa-Hsuan Lin[1,3], Tommi Raij[1], Mikko Sams[2], Christos Vasios[1], John Belliveau[1]
[1]Harvard Medical School - Martinos Center, Department of Radiology, Massachusetts General Hospital, Charlestown, MA, [2]Department of Biomedical Engineering and Computational Science, Aalto University School of Science, Espoo, Finland, [3]Institute of Biomedical Engineering, National Taiwan University, Tapei, Taiwan

986 BOLD correlates of ERP topography can dissociate between specific and non-specific task features
Ilan Laufer[1], Michiro Negishi[1], Cheryl Lacadie[1], Xenophon Papademetris[2], R. Todd Constable[2]
[1]Department of Diagnostic Radiology, Yale University, New Haven, CT, [2]Department of Diagnostic Radiology; Department of Biomedical Engineering, Yale University, New Haven, CT

987 Neural Correlates of Changing Stimulus–Response Probabilities in Speeded Choice Reactions
Robert Langner[1], Witali Pomjanski[2], Oliver Jakobs[2], Karl Zilles[3], Simon Eickhoff[1]
[1]Dept. of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [2]C. & O. Vogt Institute for Brain Research, University of Duesseldorf, Duesseldorf, Germany, [3]Institute of Neuroscience and Medicine (INM-2), Research Centre Juelich, Juelich, Germany

988 A 3-D Virtual Reality based sensory oddball task for eliciting P300
Kai-Chiun Li[1], Chun-Chuan Chen[1], Shih-Ching Yeh[2]
[1]Graduate Institute of Biomedical Engineering,National Central University, Taiwan, Taoyuan, Taiwan, Republic of China, [2]Department of Computer Science and Information Engineering, National Central University, Taiwan, Taoyuan, Taiwan, Republic of China

989 An electroencephalographic investigation of the filled-duration illusion
Takako Mitsudo[1], Caroline Gagnon[1], Hiroshige Takeichi[2], Simon Grondin[1]
[1]École de psychologie, Université Laval, Québec, Canada, [2]Laboratory for Mathematical Neuroscience, Brain Science Institute, RIKEN, Saitama, Japan

Perception and Attention

Attention: Visual

990* Category-specific preparatory bias in lateral occipital complex facilitates rapid target detection, (O-Th3)
Chun Siong Soon[1], Praneeth Namburi[1], Michael Chee[1]
[1]Duke-NUS Graduate Medical School, Singapore, Singapore

991 Behavioral and Brain Effects of Cholinergic Enhancement of Selective Attention to Faces and Houses
Emiliano Ricciardi[1,2], Pietro Pietrini[1,2], Giacomo Handjaras[1], Joanna Szczepanik[3], James Haxby[4], Maura Furey[3]
[1]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [2]Department of Laboratory Medicine and Molecular Diagnostics, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy, [3]Experimental Therapeutics and Pathophysiology Branch, NIH/NIMH, Bethesda, MD, [4]Dartmouth College, Hanover, NH

992 Spatiotopic Structural Connectivity Underlying Visual Attention
Adam Greenberg[1], Timothy Verstynen[2], Walter Schneider[2], Marlene Behrmann[1]
[1]Carnegie Mellon University, Pittsburgh, PA, [2]University of Pittsburgh, Pittsburgh, PA

993 Timing and amplitude of gamma-band deactivation in default-mode network is correlated with behavior
Tomas Ossandon[1], Karim Jerbi[1], Juan Vidal[1], Olivier Bertrand[1], Philippe Kahane[2], Jean-Philippe Lachaux[1]
[1]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Brain Dynamics and Cognition Team, Lyon, France, [2]INSERM U836 and University Joseph Fourier, Grenoble, France

994 Fronto-parietal interactions in top-down and bottom-up selection
Jane Klemen[1], Chris Chambers[2], Mareike Menz[3]
[1]School of Psychology and Cardiff University Brain Research and Imaing Centre, [2]Cardiff University, United Kingdom, [3]Deparment of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Germany, Hamburg, Germany

995 Novel fMRI Paradigm Reveals Attentional Field Topography
Alexander Puckett[1], Yan Ma[2], Jed Mathis[1], Edgar DeYoe[1]
[1]Medical College of Wisconsin, Milwaukee, United States, [2]Marquette University, Milwaukee, United States

996 Heightened PCC-DLPFC interactions are linked to slower current-trial RT but to faster next-trial RT
Jérôme Prado[1], Daniel Weissman[2]
[1]Northwestern University, Evanston, IL, [2]Department of Psychology, University of Michigan, Ann Arbor, MI

997 TMS on AIP disrupts perceptual enhancement of action relevant features
Tjerk Gutteling[1], J. Kenemans[2], Soon Park[1], Sebastiaan Neggers[3]
[1]Rudolf Magnus Institute for Neuroscience, Utrecht, Netherlands, [2]University of Utrecht, Utrecht, Netherlands, [3]University Medical Center Utrecht & Rudolf Magnus Institute for Neuroscience, Utrecht , Utrecht

998 Decoding visuospatial attention from local activity patterns in the human frontal cortex
Christian Kalberlah[1,2], Yi Chen[1,2], Jakob Heinzle[2], John-Dylan Haynes[3,1,4]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Bernstein Center for Computational Neuroscience, Charité - Universitätsmedizin Berlin, Berlin, Germany, [3]Bernstein Center for Computational Neuroscience Charité - Universitätsmedizin Berlin, Berlin, Germany, [4]Graduate School of Mind and Brain, Humboldt-Universität, Berlin, Germany

999 Stimulus value biases β and β rhythms in monkey fronto-cingulate cortex during attentional control
Martin Vinck[1], Stefan Everling[2], Daniel Kaping[3], Thilo Womelsdorf[2]
[1]University of Amsterdam, Amsterdam, The Netherlands, [2]Robarts Research Institute, London, Canada, [3]Department of Physiology and Pharmacology, University of Western Ontario, London, Canada

1000 Timing of motion-based visual attention networks explored using fMRI-neuronavigated TMS
Bonnie Alexander[1], Robin Laycock[1], Sheila Crewther[2], David Crewther[3]
[1]La Trobe University, Melbourne, Australia, [2]La Trobe University, Melbourne , Australia, [3]Swinburne University, Melbourne, Australia

1001 Sustained gamma-band responses as neural correlate of top-down processes
Tomas Ossandon[1], Juan Vidal[2], Karim Jerbi[2], Philippe Kahane[3], Olivier Bertrand[4], Jean-Philippe Lachaux[4]
[1]Lyon, France, [2]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Brain Dynamics and Cognition Team, Lyon, France, [3]INSERM U836 and University Joseph Fourier, Grenoble, France, [4]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Brain Dynamics and Cognition Team, Ly, Lyon, France

1002 Effects of autonomic stimulation on the brain at rest and during a cognitive task: an fMRI study
Barbara Basile[1], Andrea Bassi[2], Giovanni Calcagnini[3], Pietro Cortelli[4], Carlo Caltagirone[2,5], Marco Bozzali[1]
[1]Neuroimaging Laboratory, Santa Lucia Foundation, Rome, Italy, [2]Department of Clinical and Behavioural Neurology, Santa Lucia Foundation, Rome, Italy, [3]Department of Technology and Health, Italian Institute of Health, Rome, Italy, [4]Department of Neurological Science, University of Bologna, Bologna, Italy, [5]Department of Neuroscience, University of Rome 'Tor Vergata', Rome, Italy

1003 Sleep deprivation hinders distractor suppression during selective attention
Danyang Kong[1,2], Chun Siong Soon[2], Michael Chee[2]
[1]National University of Singapore, Singapore, Singapore, [2]Duke-NUS Graduate Medical School, Singapore, Singapore

1004 Cortico-tectal connectivity mediates TMS effects on visuo-attentional networks: a DTI study
Romain Quentin[1], Raffaella Migliaccio[1], Lorena Chanes[1,2], Antoni Valero-Cabré[1,3,4]
[1]Centre de Recherche de l'institut du Cerveau et de la Môelle, CR-ICM, CNRS UMR 7225, INSERM UMRS 975, Paris, France, [2]Ecole des Neurosciences de Paris, Paris, France, [3]Laboratory for Cerebral Dynamics Plasticity & Rehabilitation, Boston University School of Medicine, Boston, MA, [4]Cognitive Neuroscience and Information Technology Research Program, Open University of Catalonia (UOC), Barcelona, Spain

1005 Childhood Maltreatment is Associated with Altered Cue-Evoked Brain Activation in Adulthood
Suzanne Clerkin[1], Voula Galanopoulos[2], Olga Berwid[1,2], Kurt Schulz[1], Jeffrey Halperin[1,2]
[1]Mount Sinai School of Medicine, New York, NY, [2]Queens College, City University of New York, Flushing, NY

1006 The Right Anterior Insula Activations Irrespective of Stimulus Modality and Laterality
Yoshimi Ohgami[1], Yasunori Kotani[1], Tetsuji Tsukamoto[2], Shigeru Kiryu[3], Yusuke Inoue[4]
[1]Tokyo Institute of Technology, Meguro, Tokyo, Japan, [2]GE Healthcare Japan, Tokyo, Japan, [3]The University of Tokyo, Minato-ku, Tokyo, [4]Kitasato University, Sagamihara, Kanagawa

1007 Changes in hemispheric asymmetry across the menstrual cycle in left-right decision task
Helene Hjelmervik[1], Marco Hirnstein[2], Berge Osnes[1], Cecilie Byholt Endresen[3], Markus Hausmann[2], Kenneth Hugdahl[4], Karsten Specht[5]
[1]University of Bergen, Bergen, Norway, [2]Department of Psychology, Durham University, Durham, United Kingdom, [3]University of Bergen, [4]Division of Psychiatry and Bergen Mental Health Center, Haukeland University Hospital, Bergen, Norway, [5]Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway

1008 The disparity between cognitive vigilance and intra-operative vigilance in surgery: an fNIRS study
Colin Sugden[1], Daniel Leff[2], Felipe Orihuela-Espina[2], David James[2], Kenko Fujii[2], Ara Darzi[3], Guang-Zhong Yang[2]
[1]Imperial College London, [2]Imperial College, London, United Kingdom, [3]Imperial Collge, London, United Kingdom

1009 Deviation between eye movements and attention causes change blindness
Andrei Nikolaev[1], Peter Jurica[2], Chie Nakatani[2], Gijs Plomp[3], Cees van Leeuwen[2]
[1]Riken Brain Science Institute, Wako-shi, Japan, [2]RIKEN Brain Science Institute, Wako-shi, Japan, [3]École Politechnique Fédérale de Lausanne, Lausanne, Switzerland

1010 Frequency of Attention-Related Gamma Band Activity Decreases with Severity of Hepatic Encephalopathy
Nina Kahlbrock[1], Markus Butz[1,2], Elisabeth May[1], Meike Brenner[1], Gerald Kircheis[3], Dieter Häussinger[3], Alfons Schnitzler[1]
[1]Institute of Clinical Neuroscience and Medical Psychology, Heinrich-Heine-University, Duesseldorf, Germany, [2]University College London Institute of Neurology, London, United Kingdom, [3]Heinrich-Heine-University, Duesseldorf, Germany

1011 The Effect of Task Difficulty on Effective Connectivity of Right Anterior Insular Cortex
Yasunori Kotani[1], Yoshimi Ohgami[1], Tetsuji Tsukamoto[2], Shigeru Kiryu[3], Yusuke Inoue[4]
[1]Tokyo Institute of Technology, Meguro, Tokyo, Japan, [2]GE Healthcare Japan, Hino, Tokyo, Japan, [3]The University of Tokyo, Minato, Tokyo, [4]Kitasato University, Sagamihara, Kanagawa

1012 Intracranial gamma-band activity and the role of category information in visual search
Carlos Hamamé[1], Juan Vidal[1], Tomas Ossandon[1], Karim Jerbi[1], Sarang Dalal[2], Jean-Philippe Lachaux[3]
[1]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Brain Dynamics and Cognition Team, Lyon, France, [2]INSERM U821, France, [3]INSERM U821, Lyon, France

1013 Sex Difference in Correlation between Cognitive Style and Brain Activity in Visual DMTS in Children
Kohei Asano[1], Yasuyuki Taki[1], Hiroshi Hashizume[2], Yuko Sassa[3], Michiko Asano[4], Hikaru Takeuchi[5], Mijin Lee[1], Ryuta Kawashima[6]
[1]IDAC, Tohoku University, Sendai, Japan, [2]IDAC, Tohoku University, Japan, [3]Division of Developmental Cognitive Neuroscience, Institute of Development, Aging and Cancer (IDAC), Sendai, Japan, [4]IDAC, Sendai, Japan, [5]Smart Ageing International Research Center, Institute of Development, Aging and Cancer, Tohoku Unive, sendai, Japan, [6]SAIRC, IDAC, TOHOKU UniV, Sendai, Japan

Perception and Attention

Chemical Senses: Olfaction, Taste

1014 Evidence for ventral and dorsal streams in the chemical senses

Johannes Frasnelli[1], Johannes Gerber[2], Thomas Hummel[3], Johan Lundstrom[4], Simona Negoias[2], Franco Lepore[5]
[1]Université de Montréal, [2]University of Dresden Medical School, Dresden, Germany, [3]Technische Universität Dresden, Dresden, Germany, [4]Monell Chemical Senses Center, Philadelphia, PA, [5]Université de Montréal, Montréal, Canada

1015 Assessment of olfactory reactivity of different brain areas with fMRI

Elena Molina[1], Ana Beatriz Solana[1], Juan Antonio Hernández-Tamames[1,2,3], susana borromeo[2], Guillermo Luna[2], Juan Álvarez-Linera[1,3,4]
[1]Center for Biomedical Technology - UPM, Pozuelo de Alarcon, Spain, [2]Universidad Rey Juan Carlos, Mostoles, Spain, [3]Fundación CIEN-Fundación Reina Sofía, Madrid, Spain, [4]Hospital Ruber Internacional, Madrid, Spain

Perception and Attention

Consciousness and Awareness

1016* Measuring intracortical communication in non-communicating patients, (O-Th1)

Mario Rosanova[1], Olivia Gosseries[2], Silvia Casarotto[1], Melanie Boly[3], Adenauer Casali[1], Giulio Tononi[4], Steven Laureys[2], Marcelo Massimini[1]
[1]University of Milan, Milan, Italy, [2]University of Liege, Belgium, Liege, Belgium, [3]University of Liege, Liege, Belgium, [4]University of Wisconsin, Madison, WI

1017 Preserved bottom-up but impaired top-down processing in the vegetative state

Melanie Boly[1], Marta Garrido[2], Olivia Gosseries[3], Marie-Aurelie Bruno[3], Pierre Boveroux[3], Caroline Schnakers[3], Marcelo Massimini[4], Vladimir Litvak[5], Steven Laureys[3], Karl Friston[6]
[1]University of Liege, Liege, Belgium, [2]Wellcome Trust Centre for Neuroimaging, London, United Kingdom, [3]University of Liege, Belgium, Liege, Belgium, [4]University of Milan, [5]University College London, London, United Kingdom, [6]Wellcome Trust Centre for Neuroimaging, UCL, Lodnon, United Kingdom

1018 Reduced global functional connectivity in patients with a disorder of consciousness. An fMRI study

Julia Sophia Crone[1], Gunther Ladurner[2,3], Stefan Golaszewski[4], Martin Kronbichler[5,2]
[1]Neuroscience Institute, Christian Doppler Clinic, Salzburg, Salzburg, Austria, [2]Neuroscience Institute, Christian-Doppler-Clinic, Salzburg, Austria, [3]Department of Psychology, University of Salzburg, Salzburg, Austria, [4]Department of Neurology, Christian-Doppler-Clinic, Salzburg, Austria, [5]University of Salzburg, Salzburg, Austria

1019 Changes in Effective Connectivity during Propofol Sedation

Francisco Gómez[1], Andrea Soddu[2], Christophe Phillips[1], Melanie Boly[1], Audrey Vanhaudenhuyse[1], Pierre Boveroux[1], Severine Lauwick[3], Eduardo Romero[4], Steven Laureys[1], Quentin Noirhomme[1]
[1]Coma Science Group, Cyclotron Research Centre, University of Liege, Liege, Belgium, [2]University of Liege, Liege, Belgium, [3]CHU Sart Tilman Hospital, University of Liege, Liege, Belgium, [4]Bioingenium Research Group, Faculty of Medicine, Universidad Nacional de Colombia, Bogota, Colombia

1020 Distinct Language Activation and Connectivity Profiles in Infants Sedated with Nembutal and Propofol

Mark DiFrancesco[1], Brian Zappia[1], Sara Robertson[1], Daniel Choo[1], Scott Holland[1]
[1]Cincinnati Children's Hospital Medical Center, Cincinnati, OH USA

1021 Investigating mind-wandering and attention during focused meditation

Wendy Hasenkamp[1,2], Christine Wilson-Mendenhall[1,3], Erica Duncan[1,2], Lawrence W. Barsalou[1]
[1]Emory University, Atlanta, GA, [2]Atlanta VA Medical Center, Decatur, GA, [3]Northeastern University, Boston, MA

1022 Anesthetic sedation modulates resting connectivity of the left inferior frontal gyrus

Emmanuel Stamatakis[1], Ram Adapa[2], Anthony Absalom[3], David Menon[2]
[1]Queens' College, Cambridge, United Kingdom, [2]University of Cambridge, Cambridge, United Kingdom, [3]University Medical Center, Groningen, The Netherlands

1023 Disruption of Cortical Integration during Anesthesia

Michel van Putten[1,2]
[1]Clinical Neurophysiology Group, MIRA, University of Twente, Enschede, Netherlands, [2]Department of Neurology and Clinical Neurophysiology, Medisch Spectrum Twente, Enschede, Netherlands

1024 Source Localization of Middle Latency Auditory Evoked Potentials Indicates Effects of Anesthesia

Denis Jordan[1], Rüdiger Ilg[2], Sabine Paprotny[1], Eberhard Kochs[1], Gerhard Schneider[3]
[1]Department of Anesthesiology, Technische Universität München, Munich, Germany, [2]Department of Neurology, Technische Universität München, Munich, Germany, [3]Department of Anesthesiology, Universität Witten/ Herdecke, Wuppertal, Germany

1025 EEG Evoked Responses to Repeated Names in Propofol-altered States of Consciousness

Mariana Babo Rebelo[1], Audrey Vanhaudenhuyse[2], Andrea Soddu[2], Pierre Boveroux[2], Severine Lauwick[2], Marie-Aurelie Bruno[2], Melanie Boly[2], Christophe Phillips[3], Steven Laureys[2], Quentin Noirhomme[2]
[1]University of Liege, Liege, Belgium, [2]Coma Science Group, Liege, Belgium, [3]Cyclotron Research Center, Liege, Belgium

1026 Environmental influences on activity patterns in altered states of consciousness
Philippe PEIGNEUX[1], An-Sofie DE WEER[2], Marc DA ROS[2], Jacques BERRE[3], Christian MELOT[3], Serge GOLDMAN[4]
[1]Université Libre de Bruxelles (ULB), Bruxelles, Belgium, [2]UR2NF - Neuropsychology and Functional Neuroimaging Research Unit, ULB, Bruxelles, Belgium, [3]Intensive Care Unit, University Hospital Erasme, ULB, Bruxelles, Belgium, [4]Department of Nuclear Medicine and PET/ Biomedical Cyclotron Unit, University Hospital Erasme, ULB, Bruxelles, Belgium

1027 Changing Patterns of Correlations Between Resting State Networks During Different Tasks
Klaus B. Bærentsen[1], Johannes Damsgaard Bruhn[1], Mark Fosnæs[1], Mads Hansen[1], Cecilie Møller[1], Hans Stødkilde-Jørgensen[2]
[1]University of Aarhus, Dpt. of Psychology, Århus C, Denmark, [2]Aarhus University Hospital, Skejby, Århus, Denmark

1028 Thalamic hyperexcitability but cortico-cortical disconnection under propofol anesthesia
Melanie Boly[1], Rosalyn Moran[2], Michael Murphy[3], Pierre Boveroux[4], Marie-Aurelie Bruno[4], Quentin Noirhomme[5], Didier Ledoux[4], Jean-Francois Brichant[4], Giulio Tononi[6], Steven Laureys[4], Karl Friston[7]
[1]University of Liege, Liege, Belgium, [2]University College London, London, United Kingdom, [3]Department of Psychiatry, University of Wisconsin, Madison, WI, [4]University of Liege, Belgium, Liege, Belgium, [5]University of Liege, [6]University of Wisconsin, Madison, WI, [7]Wellcome Trust Centre for Neuroimaging, UCL, Lodnon, United Kingdom

Perception and Attention

Sleep and Wakefulness

1029 Electrographic transients during non-REM sleep and their associated haemodynamic changes
David Rollings[1], Andrew Bagshaw[1]
[1]University of Birmingham, Birmingham, United Kingdom

1030 Corresponding changes of RSN and EEG connectivity of the brain during propofol anesthesia
Rüdiger Ilg[1], Denis Jordan[2], Anna Schorer[1], Manuel Schröter[3], Victor Spoormaker[3], Susanne Neufang[4], Christine Preibisch[4], Eberhard Kochs[2], Bernhard Hemmer[1], Claus Zimmer[4], Afra Wohlschläger[4], Gerhard Schneider[5]
[1]Department of Neurology, Technische Universität München, München, Germany, [2]Department of Anesthesiology, Technische Universität München, München, Germany, [3]Max Planck Institute of Psychiatry Munich, München, Germany, [4]Department of Neuroradiology, Technische Universität München, München, Germany, [5]Department of Anesthesiology, Universität Witten/Herdecke, Wuppertal, Germany

1031 Sleep deprivation increases tonic and reduces phasic activation: a combined fMRI/pCASL study
Thomas Fischer[1,2], Kersten Diers[1], Danny Wang[3], Robert Langner[4], Hans Herzog[5], Burkhard Brocke[1], Walter Sturm[2]
[1]TU Dresden, Dresden, Germany, [2]University Hospital Aachen, Aachen, Germany, [3]Department of Neurology, University of California Los Angeles, Los Angeles, CA, [4]RWTH Aachen University, Aachen, Germany, [5]Research Center Juelich, Juelich, Germany

1032 EEG correlates of behavioural changes in vigilance in vegetative state and minimally conscious state
Marie-Aurelie Bruno[1], Eric Landsness[2], Quentin Noirhomme[3], Brady Riedner[2], Olivia Gosseries[1], Caroline Schnakers[1], Marcelo Massimini[4], Steven Laureys[1], Giulio Tononi[2], Melanie Boly[5]
[1]University of Liege, Belgium, Liege, Belgium, [2]University of Wisconsin, Madison, WI, [3]University of Liege, [4]University of Milan, [5]University of Liege, Liege, Belgium

1033 Sleep spindles and emotional intelligence in school aged children
Kerstin Hoedlmoser[1], Judith Roell[1], Philippe Peigneux[2], Wolfgang Klimesch[1], Manuel Schabus[1]
[1]University of Salzburg, Salzburg, Austria, [2]Université Libre de Bruxelles, UR2NF, Bruxelles, Belgium

1034 Deep brain modulations guided by EEG-feedback can be probed by simultaneous fMRI
Sivan Kinreich[1]
[1]Tel Aviv University, Tel Aviv, Israel

1035 Withdrawn

1036 Sleep Deprivation Impairs Effective Connectivity During Resting State
Giovanni Piantoni[1], Bing Leung Cheung[2], Barry Van Veen[2], Nico Romeijn[1], Brady Riedner[2], Giulio Tononi[2], Ysbrand Van Der Werf[1,3], Eus J.W. Van Someren[1,4]
[1]Netherlands Institute for Neuroscience, Amsterdam, Netherlands, [2]University of Wisconsin, Madison, WI, [3]VUmc University Medical Centre, Amsterdam, Netherlands, [4]VU University, Amsterdam, Netherlands

1037 Correlated fluctuations in vigilance and skin temperature: an ERP study
Jennifer Ramautar[1], german gomez herrero[1,2], Nico Romeijn[1], Eus van Someren[1,2]
[1]Netherlands Institute for Neuroscience, Amsterdam, Netherlands, [2]Department of Integrative Neurophysiology, Center for Neurogenomics and Cognitive Research, Neuroscience Campus Amsterdam, VU University, Amsterdam, Netherlands

1038 Measures of global brain dynamics define differences in neural state
David Politte[1], John Zempel[1], Tracy Nolan[1], Fred Prior[1], Linda Larson-Prior[1]
[1]Washington University in St. Louis, St. Louis, MO

Physiology, Metabolism and Neurotransmission

Cerebral Metabolism and Hemodynamic

1039* **The BOLD MRI post-stimulation undershoot in human primary motor cortex is not caused by elevated CBV, (O-W4)**
Peter Dechent[1], Gunther Helms[1], Dietmar Merboldt[2], Jens Frahm[2]
[1]MR-Research in Neurology and Psychiatry, Universitymedicine Goettingen, Goettingen, Germany, [2]Biomedizinische NMR Forschungs GmbH am MPI fuer biophysikalische Chemie, Goettingen, Germany

1040* **Alteration in cerebral blood flow during a change in glycemic state., (O-W4)**
Peter Kochunov[1], Monica Way[1], Peter Fox[1], Danny Wang[2], Paul Higgins[3], Anthony Comuzzie[3], Saroja Voruganti[3]
[1]University Of Texas Health Science Center At San Antonio, san antonio, TX, [2]UCLA, Los Angeles, United States, [3]Southwest Foundation for Biomedical Research, san antonio, TX

1041* **Cortical Depth-Dependent Temporal Dynamics of the BOLD Response in the Human Brain, (O-W4)**
Jeroen Siero[1,2,3], Natalia Petridou[1,2,3], Johannes Hoogduin[1,2,3], Peter Luijten[2,3], Nick Ramsey[1,2]
[1]Rudolf Magnus Institute, Utrecht, Netherlands, [2]University Medical Center Utrecht, Utrecht, Netherlands, [3]Radiology, Utrecht, Netherlands

1042 **The role of NAA and NAAG in brain activation: new insights revealed by fMRS**
Gabriela Castellano[1,2], Li Min Li[3,2], Carlos Dias[1,2], Bernd Foerster[4,2], Roberto Covolan[1,2]
[1]Neurophysics Group, Gleb Wataghin Physics Institute, University of Campinas - UNICAMP, Campinas - SP, Brazil, [2]CInAPCe Program (Cooperação Interinstitucional de Apoio a Pesquisas sobre o Cérebro), São Paulo State, Brazil, [3]Neurology Department, Medical Sciences School, University of Campinas - UNICAMP, Campinas - SP, Brazil, [4]Philips Medical Systems, São Paulo - SP, Brazil

1043 **Non-invasive measure of oxygen consumption changes during cortical activation in premature neonates**
Nadege Roche-Labarbe[1], Angela Fenoglio[2], Harsha Radakrishnan[1], Marcia Kocienski-Filip[3], Andrea Surova[1], Stefan Carp[1], David Boas[1], Patricia Grant[2], Maria Angela Franceschini[1]
[1]Martinos Center for Biomedical Imaging, Boston, MA, [2]Fetal-Neonatal Neuroimaging & Developmental Science Center, Children's Hospital Boston, Boston, MA, [3]Newborn Medicine, Brigham and Women's Hospital, Boston, MA

1044 **Computation of the baseline Oxygen Extraction Fraction from combined BOLD-fMRI and NIRS measurements**
Louis Gagnon[1], Meryem Yucel[2], Katherine Perdue[3], Juliette Selb[2], David Boas[1]
[1]Martinos Center for Biomedical Imaging, MGH & Harvard-MIT Division of Health Sciences and Technology, Charlestown, MA, USA, [2]Martinos Center for Biomedical Imaging, MGH, Charlestown, MA, USA, [3]Martinos Center for Biomedical Imaging, MGH & Dartmouth College, Charlestown, MA, USA

1045 **Relationship Between Cardiovascular Fitness and Cerebral Oxygenation in Young Adults**
Said Mekary[1], Paul-Olivier Leclerc[2], Claudine Gauthier[1], Laurence Desjardins-Crépeau[3], Olivier Dupuy[1], Laurent Bosquet[4], Richard Hoge[1], Louis Bherer[3]
[1]Université de Montréal, Montréal, Canada, [2]École Polytechnique Montréal, Montréal, Canada, [3]Université du Québec à Montréal, Montréal, Canada, [4]Université de Poitiers, Poitiers, France

1046 **Reliability of ASL Perfusion Measurements**
Cecilie Byholt Endresen[1], Helene Hjelmervik[1], Berge Osnes[1], Kenneth Hugdahl[1,2], Karsten Specht[1,3]
[1]Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway, [2]Division of Psychiatry, Haukeland University Hospital, Bergen, Norway, [3]Department of Clinical Engineering, Haukeland University Hospital, Bergen, Norway

Physiology, Metabolism and Neurotransmission

Neurophysiology of Imaging Signals

1047* **Variability of the Electro-physiologic Hemodynamic Relationship Across Cortical Regions in Humans, (O-W4)**
Christopher Conner[1], Timothy Ellmore[1], Thomas Pieters[1], Michael DiSano[1], Nitin Tandon[1]
[1]University of Texas Medical School at Houston, Houston, TX

1048** **Induced visual gamma amplitude increases monotonically with stimulus size**
Krish Singh[1], Gavin Perry[1], Suresh Muthukumaraswamy[1], Lisa Brindley[1], Panagiotis Covanis[1], Khalid Hamandi[2]
[1]CUBRIC, School of Psychology, Cardiff University, Cardiff, United Kingdom, [2]The Epilepsy Unit, University Hospital of Wales, Cardiff, United Kingdom

1049 **Negative BOLD/CBF responses are predicted by natural variations in ERPs to a median nerve stimulus**
Karen Julia Mullinger[1], Stephen Mayhew[2], Andrew Bagshaw[3], Richard Bowtell[1], Susan Francis[1]
[1]University of Nottingham, Nottingham, United Kingdom, [2]University of Birmingham, Birimingham, United Kingdom, [3]University of Birmingham, Birmingham, United Kingdom

1050 **Explaining suppression of the default network during cognitive performance: Effects of respiration**
Willem Huijbers[1,2], Cyriel Pennartz[1], Ewa Beldzik[3,1], Aleksandra Domagalik[3,1], Martin Vinck[1], Winni Hofman[1], Roberto Cabeza[4], Sander Daselaar[4,1]
[1]University of Amsterdam, Amsterdam, Netherlands, [2]Harvard University, Boston, MA, [3]Jagiellonian University, Krakow, Poland, [4]Duke University, Durham, NC

1051 **Spatiotemporal correlation between BOLD and electrophysiology in language function**
Dora Hermes[1], Kai Miller[2], Mariska Vansteensel[3], Cyrille Ferrier[3], Martin Bleichner[3], Erik Aarnoutse[3], Nick Ramsey[4]
[1]Rudolf Magnus Institute of Neuroscience, [2]Department of Neurobiology and Behavior, University of Washington, Seattle, WA, [3]Rudolf Magnus Institute of Neuroscience, Utrecht, Netherlands, [4]Rudolf Magnus Institute of Neuroscience, UMC Utrecht, Utrecht, Netherlands

1052 **A generalized procedure for calibrated MRI incorporating hyperoxia and hypercapnia**
Claudine Gauthier[1,2], Richard Hoge[3,2]
[1]Université de Montréal, Physiology/Biomedical Engineering Department, Montreal, Canada, [2]CRIUGM, Montreal, Canada, [3]Université de Montréal, Physiology/Biomedical Engineering, Montreal, Canada

Physiology, Metabolism and Neurotransmission

Pharmacology and Neurotransmission

1053 **Understanding the effects of ketamine on the brain: combining BOLD phMRI, CBF and subjective ratings**
Sara De Simoni[1], Owen O'Daly[1], Fernando Zelaya[1], Adam Schwarz[2], Stephanie Stephenson[1], Steven Williams[1], Mitul Mehta[1]
[1]King's College London, London, United Kingdom, [2]Eli Lilly and Company, Indianapolis, United States

1054 **Modulation of Resting State Networks by Zolpidem using a Group ICA with Dual Regression Analysis**
Lisa Nickerson[1,2], Steven Lowen[1,2], George Trksak[1,2], Scott Lukas[1,2], Stephanie Licata[1,2]
[1]McLean Hospital, Belmont, MA, [2]Harvard Medical School, Boston, MA

1055 **Blocking Cholinergic Activity Differentially Modulates Encoding based on Attended Stimulus Features**
Maura Furey[1], Andrew Speer[2], Elana Hoffman[2], Carlos Zarate[2], Wayne Drevets[3]
[1]Experimental Therapeutics and Pathophysiology Branch, NIH/NIMH, Bethesda, MD, [2]NIMH/NIH, Bethesda, MD, [3]Laureate Institute for Brain Research, Tulsa, OK

1056 **Restingstate alterations under antidepressant treatment: Bupropion and Paroxetine versa Placebo**
Coraline Metzger[1], Heiko Graf[2], Dorothea Irene Horn[1], Antonie Hartmann[2], Georg Grön[2], Angela Seeringer[3], Julia Stingl[3], Martin Walter[1], Birgit Abler[2]
[1]Clinical Affective Neuroimaging Laboratory, Department of Psychiatry, Otto-von-Guericke University, Magdeburg, Germany, [2]Department of Psychiatry, University of Ulm, Ulm, Germany, [3]Institute of Pharmacology of Natural Products & Clinical Pharmacology, University of Ulm, Ulm, Germany

1057 **Cholinergic Enhancement Modulates Neural Activity on Large Scale Representations of Faces and Houses**
Giacomo Handjaras[1], Emiliano Ricciardi[1,2], James Haxby[3], Pietro Pietrini[1,2], Maura Furey[4]
[1]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [2]Department of Laboratory Medicine and Molecular Diagnostics, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy, [3]Department of Psychological & Brain Sciences, Dartmouth College, Hanover, NH, [4]Experimental Therapeutics and Pathophysiology Branch, NIH/NIMH, Bethesda, MD

1058 **Cingulate histology and glutamate MRS predict ketamine effects on its functional rs-connectivity**
Martin Walter[1], Milan Scheidegger[2,3], Coraline Metzger[1], Alexander Fuchs[4], Heinz Boeker[3], Erich Seifritz[5], Peter Boesiger[2], Anke Henning[2], Simone Grimm[6,3]
[1]Clinical Affective Neuroimaging Laboratory, Department of Psychiatry, Otto-von-Guericke University, Magdeburg, Germany, [2]Institute for Biomedical Engineering, ETH Zurich, Zurich, Switzerland, [3]Clinic of Affective Disorders and General Psychiatry, Psychiatric University Hospital Zurich, Zurich, Switzerland, [4]Institute for Biomedical Engineering, ETH Zurich, Zurich, Switzerland, Zurich, Switzerland, [5]Clinic for Affective Disorders and General Psychiatry, Psychiatric Hospital Zurich, Zurich, Switzerland, [6]Cluster Languages of Emotion, Freie Universität Berlin, Berlin, Germany

1059 **Role of the cholinergic system for rhythmic human brain activity in a spatial visual attention task**
Markus Bauer[1], Christian Kluge[1], Dominik Bach[1], Raymond Dolan[1], Jon Driver[1]
[1]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom

Social Neuroscience

Self Processes

1060* **Experienced Meditators Reveal State And Trait Changes In Default-Mode Activity And Connectivity, (O-Th4)**
Judson Brewer[1], Hedy Kober[1], Patrick Worhunsky[1], Jeremy Gray[2], Jochen Weber[3]
[1]Yale University School of Medicine, New Haven, CT, [2]Yale University, New Haven, CT, [3]Columbia University, New York, NY

1061* **A 7T fMRI study on primary somatosensory cortex activity during observed touch of self and others, (O-Th4)**
Esther Kuehn[1], Robert Trampel[1], Karsten Mueller[1], Robert Turner[1], Simone Schuetz-Bosbach[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

1062** **"Increased connectivity of emotional brain systems after criticism in neurotic women "**
M.N. Servaas[1], H. Riese[2], R.J. Renken[1], J. Ormel[2], A. Aleman[1]
[1]Neuroimaging Center, RuG and UMC Groningen, Groningen, Netherlands, [2]Interdisciplinary Center for Psychiatric Epidemiology (ICPE), UMC Groningen, Groningen, Netherlands

1063** **Effects of a Reattribution Training on Neural Correlates of Feedback Processing in Children**
Jale Özyurt[1], Andrea Anschütz[2], Barbara Moschner[2], Ilka Parchmann[3], Sascha Bernholt[3], Christiane Thiel[1]
[1]Biological Psychology Lab, Department of Psychology, Carl von Ossietzky University, Oldenburg, Germany, [2]Department of Educational Sciences, Carl von Ossietzky University, Oldenburg, Germany, [3]Leibniz Institute of Sciences and Mathematics Education, Department of Chemistry Education, Kiel, Germany

1064 **Self-concept threat priming modulates self-face recognition - An ERP study**
Chenbo Wang[1], Yina Ma[2], Shaojuan Yang[2], Shihui Han[2]
[1]Peking University, [2]Peking University, Beijing, China

1065 **Graceful or heroic? - The cerebral substrates of gender stereotypes during self-evaluation**
Katharina Pauly[1,2], Anita Wojnar[1], Lena Hünefeld[3], Frank Schneider[1,2], Heather Hofmeister[3], Ute Habel[1,2]
[1]RWTH Aachen University, Department of Psychiatry, Psychotherapy and Psychosomatics, Medical School, Aachen, Germany, [2]JARA-BRAIN Research Alliance, Translational Brain Medicine, Jülich - Aachen, Germany, [3]RWTH Aachen University, Department of Sociology, Aachen, Germany

1066 **Culture seen with death in mind**
Verena Graupmann[1], Isabella Peres[2,1], Tonia Michaely[1], Thomas Meindl[1], Dieter Frey[1], Kai Fehse[1], Evgeny Gutyrchik[1]
[1]Ludwig Maximilian University, Munich, Germany, [2]Institute of Medical Psychology, Munich, Germany

1067 **Neural correlates of mental effort evaluation – The involvement of the anterior Insular Cortex**
Tobias Otto[1], Fred Zijlstra[2], Rainer Goebel[2]
[1]Maastricht University, [2]Maastricht University, Maastricht, Netherlands

1068 **Altered Visual and Auditory Processing in Sunyata Meditation: a combined NIRS and EEG Experiment**
Michael Erb[1], Ann-Christine Ehlis[2], Lena Ernst[3], Van-Hung Nguyen Quang Chieu[4], Master Thich Thong Triet[5], Andreas Fallgatter[3], Ranganatha Sitaram[6]
[1]Universtity Hospital Tuebingen, Tuebingen, Germany, [2]University of Tuebingen, Department of Psychiatry and Psychotherapy, Tuebingen, Germany, [3]Psychophysiology and Optical Imaging, University Hospital Tuebingen, Tuebingen, Germany, [4]ōmyatō Meditation Stuttgart, Stuttgart, Germany, [5]ōmyatō Meditation Center Perris, Riverside, CA, [6]Institute of medical psychology and behavioral neurobiology, Tuebingen, Germany

1069 **Where is the self in the midline regions?**
Pengmin Qin[1], Xuchu Weng[2], Georg Northoff[1]
[1]University of Ottawa Institute of Mental Health Research, Ottawa, Canada, [2]Institute of Psychology, Chinese Acadamey of Sciences, Beijing, China

Social Neuroscience

Social Cognition

1070* **The effects of oxytocin on the neural correlates of paternal attachment, (O-Th4)**
Dina Schardt[1,2], Johanna Gründing[1,2], Matthias Wittfoth[3,2], Anna Buchheim[4], Heinrich Lanfermann[5,2], Harald Gündel[6], Christiane Waller[6]
[1]Institute of Neuroradiology, Hannover Medical School, Hannover, Germany, [2]NICA- Neuroimaging and Clinical Applications, Hannover, Germany, [3]Department of Neurology, Hannover Medical School, Hannover, Germany, [4]Department of Psychology, Clinical Psychology, University of Innsbruck, Innsbruck, Austria, [5]Institue of Neuroradiology, Hannover Medical School, Hannover, Germany, [6]Department of Psychosomatic Medicine, University Clinic Ulm, Ulm, Germany

1071** **Political Orientation relates to structural brain volume differences**
Andries van der Leij[1], Ap Dijksterhuis[2], Rick Van Baaren[2], Victor Lamme[1], H. Steven Scholte[1]
[1]University of Amsterdam, Amsterdam, Netherlands, [2]Radboud University Nijmegen, Nijmegen, Netherlands

1072 **The modular neuroarchitecture of social judgments on faces**
Danilo Bzdok[1], Robert Langner[1], Karl Zilles[2], Simon Eickhoff[1]
[1]Department of Psychiatry and Psychotherapy, Aachen, Germany, [2]Institute of Neuroscience and Medicine, Juelich, Germany

1073 A multivariate searchlight approach in fMRI to the neural processing of social traits from voices
Phil McAleer[1], Marianne Latinus[1], Patricia E. G. Bestelmeyer[1], Kate Sully[2], Marc Becirspahic[2], Frances Crabbe[1], Alex Todorov[3], Pascal Belin[1,4]
[1]Institute of Neuroscience and Psychology, University of Glasgow, Glasgow, United Kingdom, [2]School of Psychology, University of Glasgow, Glasgow, United Kingdom, [3]Department of Psychology and Center for the Study of Brain, Mind and Behavior, Princeton University, New Jersey, U.S.A, [4]Laboratory for Brain, Music and Sound (BRAMS), Université de Montréal and McGill University, Quebec, Canada

1074 Autism-associated genetic variation in the oxytocin system impacts social processing
Carina Sauer[1], Christian Montag[2], Christiane Wörner[1], André Spachmann[1], Daniela Mier[1], Peter Kirsch[1], Martin Reuter[2]
[1]Central Institute of Mental Health, Mannheim, Germany, [2]University of Bonn, Bonn, Germany

1075 Intrinsic Brain Functional Dynamics Reflect Relative Strength in Affective or Cognitive Empathy
Christine Cox[1], Lucina Uddin[2], Adriana Di Martino[1], F. Xavier Castellanos[1,3], Michael Milham[1,3], Clare Kelly[1]
[1]Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, [2]Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA, [3]Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY

1076 Who are you angry with? The influence of self-relevance on anger processing
Julie GREZES[1], Lydia Pouga[1], Michèle Chadwick[1], Marie-Sarah Adenis[1], Jorge Armony[2]
[1]INSERM U960 - ENS, Paris, France, [2]Douglas Institute, McGill University, Montreal, Canada

1077 Minds at rest – revisited
Leonhard Schilbach[1,2], Kai Vogeley[1], Peter Fox[3], Angela Laird[3], Simon Eickhoff[4,5]
[1]Department of Psychiatry, University of Cologne, Cologne, Germany, [2]Max-Planck-Institute for Neurological Research, Cologne, Germany, [3]Research Imaging Center, UT Health Science Center, San Antonio, TX, [4]University Hospital Aachen, Aachen, Germany, [5]Institute of Neuroscience and Medicine, Research Center Juelich, Juelich, Germany

1078 Your Flaws are my Pain: On the Neural Basis of Vicarious Embarrassment
Frieder Paulus[1], Christopher Cohrs[2], Jens Sommer[1], Andreas Jansen[1], Tilo Kircher[3], Sören Krach[1]
[1]Department of Psychiatry, Section of BrainImaging, Philipps-University Marburg, Marburg, Germany, [2]School of Psychology, Queen's University Belfast, Belfast, Ireland, [3]Department of Psychiatry, Philipps-University Marburg, Marburg, Germany

1079 Police Culture Inhibit the Empathy Brain Related Activity in Women: A Neuro-Ethnographical Proposal
Roberto Mercadillo[1], Jose luis Diaz[2], Sarael Alcauter[3], Fernando Barrios[4]
[1]Universidad Nacional Autonoma de Mexico, QUERETARO, MEX, [2]School of Medicine, UNAM, MEXICO D.F., [3]Instituto Nacional de Psiquiatria, INPRF, MEXICO D.F., [4]Universidad Nacional Autonoma de Mexico, QUERETARO, QRO

1080 MEG responses to social attention and emotional expression cues from seen dynamic interacting faces
José Luis Ulloa Fulgeri[1,2,3], Aina Puce[4], Laurent Hugueville[1,2,3], Nathalie George[1,2,3]
[1]CNRS, UMR 7225, CRICM, Paris, France, [2]Inserm U 975, Paris, France, [3]Université Pierre et Marie Curie-Paris 6, Paris, France, [4]Department of Psychological and Brain Sciences, Indiana University, Bloomington, IN

1081 Effects of Female Sex Hormones on the BOLD Response to Faces
Klara Mareckova[1,2], Jennifer Perrin[3], Irum Nawaz Khan[2], Tomas Paus[4]
[1]Rotman Research Institute, Toronto, Canada, [2]University of Nottingham, Nottingham, United Kingdom, [3]University of Aberdeen, Aberdeen, United Kingdom, [4]Rotman Research Institute, University of Toronto, Toronto, Canada

1082 Empathy modulates mirror system recruitment in sighted and congenitally blind individuals
Daniela Bonino[1], Emiliano Ricciardi[1,2,3], Mario Guazzelli[4], Pietro Pietrini[1,2]
[1]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [2]Department of Laboratory Medicine and Molecular Diagnostics, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy, [3]MRI Lab, Fondazione Regione Toscana/CNR "G.Monasterio", Pisa, Italy, [4]Clinial Psychology Chair, University of Pisa, Pisa, Italy

1083 Reinforcement learning signals during the instruction of learners
Matthew Apps[1], Elise Lesage[2], Narender Ramnani[3]
[1]Royal Holloway, University of London, London, UK, [2]University of Birmingham, Birmingham, United Kingdom, [3]Royal Holloway University of London, Egham, United Kingdom

1084 Personality of male adolescents predicts functional connectivity while viewing social stimuli
Erin Dickie[1], Amir Tahmasebi[1], Natasa Kovacevic[1], E Artiges[2], Tobias Banaschewski[3], Gareth Barker[4], Ruediger Bruehl[5], Christian Büchel[6], Patricia Conrod[4], Herta Flor[7], Hugh Garavan[8], Juergen Gallinat[9], Andreas Heinz[9], Bernd Ittermann[5], Eva Loth[4], Klara Mareckova[1], Anthony McIntosh[1], Jean-Luc Martinot[10], Jean Baptiste Poline[11], Marcella Rietschel[7], Michael Smolka[12], Andreas Ströhle[9], Gunter Schumann[4], Tomas Paus[1,13,14], the IMAGEN Consortium[4]
[1]Rotman Research Institute, University of Toronto, Toronto, Canada, [2]AP-HP Department of Adolescent Psychopathology and Medicine, Maison de Solenn, Cochin Hospital, Paris, France, [3]Department of Child and Adolescent Psychiatry, Central Institute of Mental Health, Mannheim, Germany, [4]Institute of Psychiatry, King's College London, London, United Kingdom, [5]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [6]University Medical Center Hamburg-Eppendorf, Hamburg, Germany, [7]Central Institute of Mental Health, Mannheim, Germany, [8]Trinity College Dublin, Dublin, Ireland, [9]Department of Psychiatry and Psychotherapy, Campus Charité, Universitätsmedizin Berlin, Berlin, Germany, [10]Institut National de la Santé et de la Recherche Médicale, Paris, France, [11]CEA-I2BM-Neurospin, [12]Technische Universität Dresden, Dresden, Germany, [13]School of Psychology, University of Nottingham, Nottingham, United Kingdom, [14]Montreal Neurological Institute, Montreal, Canada

1085 Neural Oscillations of Interpersonal Coordination: an MEG Study
I Konvalinka[1], M Bauer[2], J Kilner[2], A Roepstorff[3], C Frith[2]
[1]Aarhus University / UCL, Aarhus, Denmark, [2]UCL, London, United Kingdom, [3]Aarhus University, Aarhus, Denmark

1086 Different neural substrates engage in bottom-up and top-down contextual event simulation
Yukihito Yomogida[1,2], Motoaki Sugiura[1], Yoritaka Akimoto[1], Carlos Makoto Miyauchi[1], Ryuta Kawashima[3,1]
[1]IDAC, Tohoku University, Sendai, Japan, [2]JSPS, Tokyo, Japan, [3]SAIRC, Tohoku University, Sendai, Japan

1087 Abstract Social Intentions: an fMRI study about imitation of social gestures
Alessandra Ghinato Mainieri[1,2], Stefan Heim[3], Benjamin Straube[4], Tilo Kircher[4]
[1]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen,Germany, [2]JARA - Translational Brain Medicine, Aachen, Germany, [3]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [4]Department of Psychiatry und Psychotherapy, Philipps-University Marburg, Marburg, Germany

1088 Neural substrates of causal attribution of animated social behaviors
Shihui Han[1]
[1]Peking University, Beijing, China

1089 Humanized perception of potential victims in moral dilemmas recruits empathy-related brain areas
Jasminka Majdandzic[1,2], Christian Windischberger[2], Christian Langer[3], Ewald Moser[2], Herbert Bauer[1], Claus Lamm[1]
[1]Social, Cognitive and Affective Neuroscience Unit, Faculty of Psychology, University of Vienna, Austria, [2]MR Centre of Excellence, Medical University of Vienna, Austria, [3]Austrian Federal Ministry of Defence and Sports, Vienna, Austria

1090 Degree of perceived irony modulates amygdala activity: fMRI evidence
Yoritaka Akimoto[1], Motoaki Sugiura[1], Yukihito Yomogida[1], Carlos Makoto Miyauchi[1], Shiho Miyazawa[2], Ryuta Kawashima[3]
[1]IDAC, Tohoku University, Sendai, Japan, [2]Graduate School of Medicine, Tohoku University, Sendai, Japan, [3]SAIRC, IDAC, TOHOKU UniV, Sendai, Japan

1091 Individual Difference in Cognitive Processes during Thinking: An fMRI Study on "Who's Done It" Task
Motoaki Sugiura[1], Yukihito Yomogida[1,2], Yoko Mano[1], Atsushi Sekiguchi[1], Toshimune Kambara[1,2,3], Ryuta Kawashima[1]
[1]IDAC, Tohoku University, Sendai, Japan, [2]JSPS, Tokyo, Japan, [3]IIARE, Tohoku University, Sendai, Japan

1092 Effect of empathic concern induction on neural responses during decisions in the Ultimatum Game
Patrick Williams[1], Jorge Barraza[1], Paul Zak[1], Michael Spezio[2]
[1]Claremont Graduate University, Claremont, CA, [2]Scripps College, Claremont, CA

1093 The effect of visual perspective on the somatosensory excitability during pain observation
Dora Linsey Canizales[1,2,3], Pierre-Emmanuel Michon[2], Julien Voisin[2], Michel-Pierre Coll[2,3], Marc-André Roy[1], Philip Jackson[2]
[1]Centre de recherche Université Laval Robert Giffard, Québec, Canada, [2]Centre Interdisciplinaire de Recherche en Réadaptation et Intégration Sociale, Québec, Canada, [3]École de psychologie, Université Laval, Québec, Canada

1094 Temporal Components of Chinese Kinship Representation: An ERP Study
Yue Ge[1], Chunliang Feng[1], Honghong Tang[1], Yue-Jia Luo[1], Chao Liu[1]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

1095 I know what you'll feel: Affective Mentalizing in Alexithymia, an fMRI Study
Katharina Goerlich[1,2], Andre Aleman[1], Christine Hooker[2]
[1]Neuroimaging Center, University of Groningen, Groningen, Netherlands, [2]Department of Psychology, Harvard University, Cambridge, MA

1096 Emotion Regulation Skills modulate the BOLD Response to Empathy for Pain
Denise Dörfel[1,2], Anke Karl[3], Peter Richter[2], Annett Werner[4], Gabriele Buruck[2]
[1]Divison of Mind and Brain Research, Charitè Universitätsmedizin Berlin, Berlin, Germany, [2]Technische Universität Dresden, Department of Psychology, Work and Organizational Psychology, Dresden, Germany, [3]University of Exeter, School of Psychology, Clinical Psychology, Exeter, United Kingdom, [4]Technische Universität Dresden, University Hospital Carl Gustav Carus, Department Neuroradiology, Dresden, Germany

1097 Activity of mirror neuron system when observing unnatural actions of a CG character
Kazuma Oki[1], Sotaro Shimada[2]
[1]Meiji University, Japan, [2]Meiji University, Japan

1098 Differences of brain activities in perspective-taking with presented emotional situations
Momo Kim[1], Seungbok Lee[1], Eunae Lee[1], Jungwoo Son[2]
[1]Department of Psychology, Chungbuk National University, Cheongju, Korea, Republic of, [2]Department of Neuropsychiatry, College of Medicine, Chungbuk National University, Cheongju, Korea, Republic of

1099 Brain Activities during Judged Congruent Situation or Not on Social Perception;a preliminary study
YoungSeok Shin[1], Jae-Jin Kim[2], Soo Hee Choi[3], Jinsick Park[1], Kang Jun Yoon[4], Hyeongrae Lee[1], Je Yeon Lee[1], In Young Kim[1], Sun I. Kim[1], Yohan Son[1]
[1]Hanyang University, Seoul, Korea, Republic of, [2]Institute of Behavioral Science in Medicin, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Department of Psychiatry, Yonsei University College of Medicine, Seoul, Korea, Republic of, [4]St. Peter's Hospital, Seoul, Korea, Republic of

Social Neuroscience

Social Interaction

1100* Decoding inter-individual relations from spatial similarity of brain activity, (O-Th4)
Silke Anders[1], John-Dylan Haynes[2], Thomas Ethofer[3]
[1]University of Luebeck, Luebeck, Germany, [2]Bernstein Center for Computational Neuroscience Charité - Universitätsmedizin, Berlin, Berlin, Germany, [3]Department of General Psychiatry, University of Tübingen, Tuebeingen, Germany

1101 Joint attention between individuals with normal and autism spectrum disorders using dual fMRI
Hiroki Tanabe[1,2], Hirotaka Kosaka[3], Daisuke Saito[1,3], Toshio Munesue[4], Hidehiko Okazawa[3], Yuji Wada[3], Norihiro Sadato[1,2]
[1]National Institute for Physiological Sciences, Okazaki, Aichi, Japan, [2]The Graduate University for Advanced Studies, Okazaki, Aichi, Japan, [3]University of Fukui, Eiheiji, Fukui, Japan, [4]Kanazawa University, Kanazawa, Ishikawa, Japan

1102* Imaging the social brain: a simultaneous multi-subject EEG hyperconnectivity study, (O-Th4)
Laura Astolfi[1], Fabrizio De Vico Fallani[1], Jlenia Toppi[1], Febo Cincotti[2], Christopher Wilke[3], Han Yuan[3], Alexander Doud[3], Serenella Salinari[4], Donatella Mattia[2], Bin He[3], Fabio Babiloni[1]
[1]University of Rome " Sapienza" and Fondazione Santa Lucia IRCCS, Rome, Italy, [2]IRCCS Fondazione Santa Lucia, Rome, Italy, [3]University of Minnesota, Minneapolis, MN, United States, [4]University of Rome 'Sapienza', Rome, Italy

1103 Development of real-time mapping system for interpersonal synchrony during hyperscan fMRI**
Chang-Won Jang[1,2], Sunghyon Kyeong[1,2], Dongha Lee[1,2], Hae-Jeong Park[1,2]
[1]Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, SEOUL, Republic Of Korea, [2]Department of Radiology and Division of Nuclear Medicine, Yonsei University College of Medicine, SEOUL, Korea, Republic of

1104 The interpersonal interaction in a competitive Tetris game under implicit and explicit conditions
Yun-An Huang[1], Tai-Li Chou[2], Keng-Chen Liang[2], Jyh-Horng Chen[3]
[1]Dept. of Electrical Engineering, National Taiwan University, Taipei, Taiwan, [2]Dept. of Psychology, National Taiwan University, Taipei, Taiwan, Republic of China, [3]National Taiwan University, Taipei, Taiwan, Republic of China

1105 Neural correlates of impulsivity in males with high and low trait aggressiveness
Christina Pawliczek[1], Birgit Derntl[2], Thilo Kellermann[3], Ruben Gur[4], Ute Habel[5]
[1]Aachen, Germany, [2]University of Vienna, Vienna, Austria, [3]RWTH Aachen University, Aachen, Germany, [4]University of Pennsylvania, Philadelphia, PA, [5]University of Aachen, Aachen, Germany

1106 Neural Correlates of Social Norm Compliance in Forensic Patients with Psychopathic Traits
Leila Haddad[1], Harald Dressing[2], Daniela Mier[3], Ernst Fehr[4], Andreas Meyer-Lindenberg[5], Peter Kirsch[6]
[1]Central Institute of Mental Health Mannheim, [2]central Institute of Mental Health, Mannheim, Germany, [3]Department of Clinical Psychology, Central Institute of Mental Health, Mannheim, Germany, [4]University of Zurich, Zurich, Switzerland, [5]Central Institute of Mental Health, [6]Central Institute of Mental Health, Mannheim, Germany

1107 Spatial attention and response bias modulates oscillations during movement observation: a MEG study
Heng-Ru May Tan[1], Hartmut Leuthold[2], Joachim Gross[3]
[1]University of Glasgow, GLASGOW, United Kingdom, [2]University of Glasgow, Glasgow, United Kingdom, [3]Glasgow, United Kingdom

1108 Neural basis of interactive behaviour
Bianca Backasch[1], Benjamin Straube[1], Martin Pyka[1], Kircher Tilo[1], Dirk Leube[2]
[1]Department of Psychiatry und Psychotherapy, Philipps-University Marburg, Marburg, Germany, [2]Department of Psychiatry and Psychotherapy, Philipps-University, Marburg, Germany

1109 Schizophrenia, social emotional processing and the role of the left ventrolateral prefrontal cortex
Lisette Van Der Meer[1], Marieke Pijnenborg[2], Willem Nolen[3], Andre Aleman[4]
[1]BCN Neuroimaging Center, Groningen, Netherlands, [2]Rijksuniversiteit Groningen, Groningen, Netherlands, [3]University Medical Center Groningen, Groningen, Netherlands, [4]BCN NeuroImaging Center, Groningen, Netherlands

1110 Neural substrates of social approach and avoidance
Birgit Derntl[1,2], Eva-Maria Seidel[2], Simon Eickhoff[2], Thilo Kellermann[2], Ruben Gur[3], Frank Schneider[2], Ute Habel[2]
[1]University of Vienna, Vienna, Austria, [2]RWTH Aachen University, Department of Psychiatry, Psychotherapy and Psychosomatics, Aachen, Germany, [3]University of Pennsylvania, Philadelphia, PA

1111 Neural Correlates of Risk and Ambiguity in Social Decision-Making
Nina Lauharatanahirun[1], George Christopoulos[2], Stephanie Regan[3], Brooks King-Casas[2,4,5]
[1]Virginia Tech Carilion Research Institute, Roanoke, VA, [2]Virginia Tech Carilion Research Institute, Roanoke, VA, [3]Harvard University, Boston, MA, [4]Department of Psychology, Virginia Tech, Blacksburg, VA, [5]Salem Veteran Affairs Medical Center, Salem, VA

1112 Directed altruism induced by "warm-glow" through empathy: an fMRI study
Hiroaki Kawamichi[1], Hiroki Tanabe[2], Haruka Takahashi[3], Koji Shimada[3], Norihiro Sadato[2]
[1]National Insutitue for Physiological Sciences, Okazaki, Aichi, Japan, [2]National Institute For Physiological Sciences, Okazaki, Aichi, Japan, [3]The Graduate University for Advanced Studies, Okazaki, Aichi, Japan

1113 Brain Responses to Social Exclusion by Same and Other Gender Peers
Danielle Bolling[1], Kevin Pelphrey[2], Brent Vander Wyk[2]
[1]Yale Child Study Center, [2]Yale Child Study Center, New Haven, CT

1114 Different Neural Activity within Cooperative vs. Competitive context
Shin-ae Yoon[1], In young Shin[2], Eun bi Lim[3], Joohan Kim[2], Eun Joo Kim[3], Hae-Jeong Park[4]
[1]Department of Radiology, Nuclear Medicine and Research Institute of Radiological Science, Yonsei Uni, Seoul, Korea, Republic of, [2]The department of graduate school of Communication, Yonsei University, Seoul, Korea, Republic of, [3]The department of the graduate School of Education, Yonsei University, Seoul, Korea, Republic of, [4]Department of Radiology and Psychiatry, Severance Biomedical Science Institute, Yonsei University, Seoul, Korea, Republic of

1115 Gender Differences in Trust during Economic Exchange: An fMRI investigation
Frank Krueger[1], Jordan Grafman[2], Kevin McCabe[3], Viren Vasudeva[4]
[1]George Mason University, [2]NINDS, Bethesda, MD, [3]George Mason University, Fairfax, VA, [4]Medical College of Georgia School of Medicine, Augusta, GA

1116 Utilization of national traffic educational campaign for the Theory of mind research
Jana Zelinkova[1], Milan Brazdil[2], Radek Marecek[2], Michal Mikl[2], Tomas Urbanek[3]
[1]First Department of Neurology, Masaryk University, St. Anne's Faculty Hospital, Pekarska 53, Brno 65, [2]First Department of Neurology, Masaryk University, St. Anne's Faculty Hospital, Pekarska 53, Brno 65, Brno, Czech Republic, [3]Institute of Psychology, Academy of Sciences of the Czech Republic, Veveri 97, 602 00 Brno, Brno, Czech Republic

1117 An fMRI Study on Fairness in Social Interaction under Competitive and Cooperative conditions
Po-Yih Lee[1], Yun-An Huang[1], Tai-Li Chou[2,3], Jyh-Horng Chen[1,3]
[1]Interdisciplinary MRI/MRS Lab, Department of Electrical Engineering, National Taiwan University, Taipei, Taiwan, Republic of China, [2]Dept. of Psychology, National Taiwan University, Taipei, Taiwan, Republic of China, [3]Neurobiology and Cognitive Science Center, National Taiwan University, Taipei, Taiwan, Republic of China

Schedule of Poster Presentations
Wednesday, June 29, 2011 and Thursday, June 30, 2011

** Indicates poster will also be presented during an Oral Session. The Oral Session number is indicated in parantheses after the poster title.*

*** Indicates poster will also be presented as an I-Poster. Please check the Program Book for I-Poster presentation times.*

Information listed, including author affiliations, appear as submitted.

Disorders of the Nervous System

Addictions

1* Dissecting frontal lobe contributions to drug craving with fMRI and TMS, (O-T1)
Takuya Hayashi[1,2], Ji Hyun Ko[1,3], Antonio Strafella[1,3], Alain Dagher[1]
[1]Montreal Neurological Institute, McGill University, Montreal, Canada, [2]RIKEN Center for Moleculer Imaging Science, Kobe, Japan, [3]University of Tronto, Tronto, Canada

2 OFC depicts approach preferences for alcohol stimuli in alcohol dependence**
Lena Ernst[1], Michael Plichta[2], Anna Zesewitz[3], Thomas Dresler[3], Sara Tupak[3], Matthias Fischer[3], Thomas Polak[3], Ann-Christine Ehlis[1], Andreas Fallgatter[1]
[1]Psychophysiology and Optical Imaging, University Hospital Tuebingen, Tuebingen, Germany, [2]Department of Psychiatry, Division for Imaging in Psychiatry, Central Institute of Mental Health, Mannheim, Germany, [3]Psychophysiology and Functional Imaging, University Hospital Wuerzburg, Wuerzburg, Germany

3 Methamphetamine Dependent and Control Subjects Use Different Neural Strategies for Delay Discounting**
William Hoffman[1], Daniel Schwartz[2], David Lahna[2], Marilyn Huckans[3], Suzanne Mitchell[2]
[1]Veterans Affairs Medical Center, Portland, United States, [2]Oregon Health & Science University, Portland, OR, [3]Veterans Affairs Medical Center, Portland, OR

4 Evidence for involvement of the insula in the psychotropic effects of THC in humans
Hendrika van Hell[1], Matthijs Bossong[1], Johan Jansma[1], Gerry Jager[2], Nick Ramsey[1]
[1]Rudolf Magnus Institute, UMC Utrecht, Utrecht, Netherlands, [2]Division of Human Nutrition, Wageningen University, Wageningen, Netherlands

5 Is Response Feedback Processing in Abstinent Smokers Under Nicotinic Modulation?
Matthew Sutherland[1], Allison Carroll[1], Betty Jo Salmeron[1], Thomas Ross[1], Elliot Hong[2], Elliot Stein[1]
[1]Neuroimaging Research Branch, National Institute on Drug Abuse, Baltimore, MD, [2]Maryland Psychiatric Research Center, Baltimore, MD

6 Neural correlates of the phenotypic structure of externalising symptoms
Patricia Conrod[1], Natalie Castellanos-Ryan[2], Maren Struve[3], Robert Whelan[4], Jean-Baptiste Poline[5], Tobias Banaschewski[6], Gareth Barker[7], Christian Büchel[8], Herta Flor[3], Bernd Ittermann[9], Karl Mann[3], Jean-Luc Martinot[10], Tomas T Paus[11], Marcella Rietschel[3], Trevor Robbins[12], Michael Smolka[13], Andreas Ströhle[14], Gunter Schumann[1], Hugh Garavan[15]
[1]King's College London, Institute of Psychiatry, London, United Kingdom, [2]University de Montreal, Montreal, Quebec, [3]Central Institute of Mental Health, Mannheim, Germany, [4]Trinity University Dublin, Dublin, Iceland, [5]CEA-I2BM-Neurospin, [6]Department of Child and Adolescent Psychiatry, Central Institute of Mental Health, Mannheim, Germany, [7]Institute of Psychiatry, King's College, London, United Kingdom, [8]University Medical Center Hamburg-Eppendorf, Hamburg, Germany, [9]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [10]Institut National de la Santé et de la Recherche Médicale, Paris, France, [11]Rotman Research Institute, University of Toronto, Toronto, Canada, [12]University of Cambridge, Cambridge, United Kingdom, [13]Technische Universität Dresden, Dresden, Germany, [14]Department of Psychiatry and Psychotherapy, Campus Charité, Universitätsmedizin Berlin, Berlin, Germany, [15]Trinity College Dublin, Dublin, Ireland

7 Support vector machine classification of nicotine dependent subjects' crave-state
Yash Shah[1], Luis Hernandez-Garcia[2], Douglas Noll[2], Kinh Luan Phan[2], Mark Greenwald[3], Jon-Kar Zubieta[2], Scott Peltier[2]
[1]University Of Michigan, Ann Arbor, MI, USA, [2]University of Michigan, Ann Arbor, MI, USA, [3]Wayne State University, Detroit, MI, USA

8 Neurobehavioral Effects of Cocaine Use in a Social Dominance Task
Katherine McCurry[1], Nina Lauharatanahirun[1], Richard De La Garza[2,3], Thomas Newton[2,3], Pearl Chiu[1,3,4,5], Brooks King-Casas[1,4,5]
[1]Virginia Tech Carilion Research Institute, Roanoke, VA, [2]Baylor College of Medicine, Houston, TX, [3]Michael E. Debakey Veteran Affairs Medical Center, Houston, TX, [4]Department of Psychology, Virginia Tech, Blacksburg, VA, [5]Salem Veteran Affairs Medical Center, Salem, VA

9 Reduced error processing in the rostral Cingulate Zone in smokers is modulated by dopamine
Maartje Luijten[1], Dick Veltman[2], Lolke Pepplinkhuizen[3], Marion Smits[4], Ingmar Franken[1]
[1]Erasmus University Rotterdam - Institute of Psychology, Rotterdam, Netherlands, [2]VU University Medical Center, Department of Psychiatry, Amsterdam, Netherlands, [3]Parnassia Bavo Group, Rotterdam, Netherlands, [4]Erasmus MC, Rotterdam, Netherlands

>> Wednesday, June 29: 13:15 – 15:45 (even numbers)
>> Thursday, June 30: 10:30 – 13:00 (odd numbers)

10 Impairment of driving abilities after cannabis smoking: the role of the anterior cingulate cortex
Giovanni Battistella[1], Eleonora Fornari[2], Aurélien Thomas[3], Jean-Frédéric Mall[4], Jean-Marie Annoni[5], Monique Appenzeller[4], Bernard Favrat[3], Thierry Buclin[4], Christian Staub[3], Patrice Mangin[3], Christian Giroud[3], Philippe Maeder[1]
[1]Dept. of Radiology, CHUV and University of Lausanne, Lausanne, Switzerland, [2]CIBM-CHUV Unit,Radiology Dept., CHUV and University of Lausanne, Lausanne, Switzerland, [3]University Center of Legal Medicine, Lausanne-Geneva, Switzerland, [4]Division of Clinical Pharmacology and Toxicology, CHUV and University of Lausanne, Lausanne, Switzerland, [5]Neurology Unit, dpt of Medicine, University Fribourg Medical Centre, Fribourg,Switzerland

11 Learning to quit: The roles of amygdala and hippocampus in smoking cessation
Shao-Hsuan Ho[1], Hannah Chua[1], James Abelson[1], Agnes Jasinska[1], Israel Liberzon[1], Victor Strecher[1]
[1]University of Michigan, Ann Arbor, MI

12 Prospect and Anticipation in Reward-Punishment Circuitry in Former & Current Cocaine Users
Krishna Pancholi[1], Shashwath Meda[1], Marc Potenza[2], Michael Stevens[1,2], Godfrey Pearlson[1,2]
[1]Olin Neuropsychiatry Research Center, Hartford Hospital, Hartford, CT, [2]Dept. of Psychiatry, Yale University School of Medicine, New Haven, CT

13 Functional connectivity during reward mediates sensation seeking and substance use in at-risk youth
Barbara Weiland[1], Wai-Ying Wendy Yau[1], Robert Welsh[2], Preeti Samudra[3], Robert Zucker[4], Jon-Kar Zubieta[3], Mary Heitzeg[3]
[1]University of Michigan, Ann Arbor, MI, USA, [2]University of Michigan, Ann Arbor, United States, [3]University of Michigan, Ann Arbor, MI, [4]Univesity of Michigan, Ann Arbor, MI

14 Structural deficits associated with cognitive dysfunction in methadone maintenance patients
Chu-Chung Huang[1], Wei-Che Lin[2], Kun-Hsien Chou[3], Ching-Po Lin[4]
[1]Institue Of Biomedical Imaging And Radiological Sciences, National Yang-Ming University, Taiwan- Republic Of China, [2]Department of Diagnostic Radiology, Chang Gung Memorial Hospital - Kaohsiung Medical Center, Kaohsiung, Taiwan, Republic of China, [3]National Yang Ming University, Taiwan- Republic Of China, [4]National Yang-Ming University, Taipei, Taiwan- Republic Of China

15 Combined Structural and Functional Measures in Recreational Users of d-amphetamine
Marieke Schouw[1], Kenichi Oishi[2], Matthan Caan[1], Aart Nederveen[1], Susumu Mori[2], Liesbeth Reneman[1]
[1]Academic Medical Center, University of Amsterdam, Department of Radiology, Amsterdam, the Netherlands, [2]The Russell H. Morgan Dept. of Radiology and Radiological Sciences, Johns Hopkins School of Medicine, Baltimore, MD

16 Regional White Matter Integrity in Abstinent Alcoholics
Regina McGlinchey[1,2], Catherine Fortier[3,4], ELIZABETH LERITZ[5,6], Jonathan Venne[7], Victoria Williams[1], William Milberg[1,2], David Salat[8,9]
[1]VA Boston Healthcare System, Boston, MA, [2]Harvard Medical School, Boston , MA, [3]VA Boston Healthcare System 182-JP, United States, [4]Harvard Medical School, Boston, MA, [5]BOSTON VA / ATHINOULA A. MARTINOS CENTER, MGH, BOSTON, United States, [6]Brigham and Women's Hopsital, Boston , MA, [7]VA Boston Healthcare System, Boston , MA, [8]Massachusetts General Hospital Athinoula A. Martinos Center for Biomedical Imaging, Boston, MA, [9]VA Boston Healthcare Sytesm, Boston, MA

17 FDG-PET and anatomical MRI in non-abstinent alcohol-dependent subjects
Monte Buchsbaum[1], Simone Carvalho[2], Samantha Lincoln[3], Chelain Goodman[3], Alex DeCastro[4], Jonathan Entis[3], Erin Hazlett[5]
[1]University of California, San Diego, [2]Mount Sinai School of Medicine, New York , NY, [3]Mount Sinai School of Medicine, New York, NY, [4]University of California, San Diego, San Diego, CA, [5]J.J.P. VA Medical Center, New York, NY

18 The influence of familial alcohol dependence on performance and BOLD-signal during planning
Zsuzsika Sjoerds[1], Marie-José Van Tol[2], Wim Van den Brink[3], Brenda Penninx[4], Nic van der Wee[5], Andre Aleman[6], Dick Veltman[7]
[1]VU University Medical Centre, Amsterdam, Netherlands, [2]Leiden University Medical Center, Leiden, Netherlands, [3]Academic Medical Center, University of Amsterdam, Department of Psychiatry, Amsterdam, Netherlands, [4]VUMC, Amsterdam, Netherlands, [5]LUMC, Leiden, Netherlands, [6]BCN NeuroImaging Center, Groningen, Netherlands, [7]VU University Medical Center, Department of Psychiatry, Amsterdam, Netherlands

19 Effects of extensive playing of violent video games in resting-state networks
Bahram Mohammadi[1], Gregor Szycik[2], Christian F Beckmann[3], Amir Samii[1], Thomas Münte[4], Bert Tewildt[2]
[1]INI, Hannover, Germany, [2]Psychiatry, MHH, Hannover, Germany, [3]Univ Of Oxford, Oxford, United Kingdom, [4]Neurology, University of Lübeck, Lübeck, Germany

20 Structural brain alterations in heavy cannabis users
Janna Cousijn[1], Anna Goudriaan[2], K. Ridderinkhof[1], Wim Van den Brink[2], Dick Veltman[2], Reinout Wiers[1]
[1]University of Amsterdam, Department of Psychology, Amsterdam, Netherlands, [2]Academic Medical Center, University of Amsterdam, Department of Psychiatry, Amsterdam, Netherlands

21 Lower White Matter Diffusion in Adolescent Marijuana Users
Christine Cloak[1], Jeff Sadino[1], Linda Chang[1], Caroline Jiang[1], Daniel Alicata[1], Thomas Ernst[1]
[1]University of Hawaii, Manoa; JABSOM, Honolulu, HI

22 Abnormal striatal morphology in methamphetamine and cannabis abusing adolescents
John Churchwell[1,2], Paul Carey[3], Helen Ferrett[3], Dan Stein[3], Bruce Spottiswoode[4], Deborah Yurgelun-Todd[1,2]
[1]The Brain Institute, University of Utah, Salt Lake City, UT, [2]University of Utah Dept. of Psychiatry, Salt Lake City, UT, [3]Department of Psychiatry, University of Stellenbosch, Cape Town, South Africa, [4]Cape Town University, Cape Town, South Africa

23 An investigation into grey and white matter differences in current polydrug Ecstasy users
Brendan Behan[1], Erik O'Hanlon[2], Gloria Roberts[3], Hugh Garavan[1]
[1]Trinity College Institute of Neuroscience, Dublin, Ireland, [2]Royal College of Surgeons Ireland, Dublin, Ireland, [3]The University of New South Wales, Sydney, Australia

24 Functional response to drug-cues in patients with chronic addiction to cocaine and heroin
Simona Gardini[1], Luca Nocetti[2], Cristian Toraci[3], Annalena Venneri[4,5]
[1]Department of Neuroscience, University of Parma, Parma, Italy, [2]Servizio di Fisica Sanitaria, Azienda Ospedaliera, Policlinico di Modena, Modena, Italy, [3]Biolab, Department of Communication, Computer and System Science (DIST), University of Genoa, Genoa, Italy, [4]Clinical Neuroscience Centre, Univeristy of Hull, Hull, United Kingdom, [5]San Camillo Hospital, IRCCS, Venice, Italy

25 Implicit emotional processing (fMRI) in alcohol-dependent patients
Katrin Charlet[1], Karina Naundorf[1], Lina Dornhof[1], Torsten Wüstenberg[1], Florian Schlagenhauf[1], Anne Beck[1], Andreas Heinz[1]
[1]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany

26 Prenatal drug exposure alters adolescent neural responses in a probabilistic reward/punishment task
Betty Jo Salmeron[1], Maureen Black[2], Kelsey Cacic[3], Monique Ernst[4], Tracy Riggins[5], Julie Schweitzer[6], Pradeep Kurup[7]
[1]NIDA-IRP, [2]University of Maryland, School of Medicine, Baltimore, MD, [3]NIDA-IRP, Baltimore, MD, [4]NIMH, Bethesda, MD, [5]University of Maryland, College Park, College Park, MD, [6]University of California Davis School of Medicine, Sacramento, United States, [7]NIDA, NIH, Baltimore, United States

27 Network Analysis of Structural Connectivity from Diffusion Tensor Imaging in Chronic Cannabis Users
Dae-Jin Kim[1], Hu Cheng[1], Patrick Skosnik[2], William Hetrick[1], Brian O'Donnell[1], Olaf Sporns[1], Aina Puce[1], Sharlene Newman[1]
[1]Psychological and Brain Sciences, Indiana University, Bloomington, IN, USA, [2]Department of Psychiatry, Yale University School of Medicine, New Haven, CT, USA

28 White Matter Hyperintensities in an Inner City Population
Maia Love[1], William Honer[2], Donna Lang[2], G. MacEwan[2], A. Vertinsky[2], Fidel Vila-Rodriguez[2]
[1]UBC (Vancouver BC) Medical resident, Vancouver, Canada, [2]UBC Brain Research Centre, Vancouver, B.C.

29 Could We Predict Treatment Outcome among Heroin Dependents Based on Brain Activities Due to Craving?
Hamed Ekhtiari[1], Habib Ganjgahi[2], Peyman Hassani-Abharian[3], Zahra Alam-Mehrjerdi[4], Mohammad Ali Oghabian[5]
[1]Iranian National Center for Addiction Studies, Tehran, Iran, Islamic Republic Of, [2]Iranian National Center For Addiction Studies, Tehran, Iran, Islamic Republic Of, [3]Institute for Cognitive Sciences Studies, Tehran, Iran, Islamic Republic Of, [4]Iranian National Center for Addiction Studies, Tehran, Iran, Islamic Replblic of, [5]Research Center for Science and Technologies, Tehran University of Medical Sciences, Tehran, Iran, Islamic Replblic of

Disorders of the Nervous System

Obsessive-Compulsive Disorder and Tourette Syndrome

30 ** **Increased intrinsic connectivity of the orbitofrontal cortex in Obsessive-Compulsive Disorder**
Jan Beucke[1], Jorge Sepulcre[2], Tanveer Talukdar[3], Christian Kaufmann[1], Norbert Kathmann[1]
[1]Department of Psychology, Humboldt-Universität zu Berlin, Berlin, Germany, [2]Howard Hughes Medical Institute, Harvard University, Cambridge, MA, [3]Dartmouth

31 Deficient response inhibition in unmedicated obsessive compulsive disorder patients: an fMRI study
Stella De Wit[1,2], Ysbrand Van Der Werf[3,2], Dirk Heslenfeld[4], Eveline Veltman[1], Dick Veltman[1,2], Odile van den Heuvel[1,2]
[1]Dept. of Psychiatry, VU University Medical Center, Amsterdam, Netherlands, [2]Neuroscience Campus Amsterdam, Amsterdam, Netherlands, [3]Dept. of Anatomy & Neuroscience, VU University Medical Center, Amsterdam, Netherlands, [4]Dept. of Cognitive Psychology, VU University, Amsterdam, Netherlands

32 Gray matter volume alterations in obsessive-compulsive disorder: absolute vs. relative differences
Carles Soriano-Mas[1], Jesus Pujol[2], Pino Alonso[3], Eva Real[3], Rosa Hernández-Ribas[3], Marina Lopez Sola[4], Ben Harrison[5], Hector Ortiz[2], Oren Contreras[6], Laura Blanco[6], Johan Deus[7], José Menchón[3], Narcis Cardoner[3]
[1]Instituto Carlos III. Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [2]CRC-Mar, Barcelona, Spain, [3]Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [4]IDIBELL, Barcelona, Spain, [5]Melbourne Neuropsychiatry Centre, The University of Melbourne, Melboune, Australia, [6]CRC-Mar, IMIM, Barcelona, Spain, [7]Universitat Autonoma de Barcelona, Barcelona, Spain

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33 Anterior cingulate cortex volume distinguishes from patients with resistant and non-resistant OCD

Narcis Cardoner[1,2], Carles Soriano-Mas[1], Jesus Pujol[3], Eva Real[1], CINTO SEGALÀS[1], Ben Harrison[4], Rosa Hernández-Ribas[1,2], Marina Lopez Sola[5], Esther Via[1], Oren Contreras-Rodríguez[3], Laura Blanco[3], Johan Deus[6], Pino Alonso[1,2], José Menchón[1,2]
[1]Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [2]CIBERSAM, Barcelona, Spain, [3]CRC-Hospital del Mar, Barcelona, Spain, [4]Melbourne Neuropsychiatry Centre, The University of Melbourne, Melbourne, Australia, [5]IDIBELL-CIBERSAM, Barcelona, Spain, [6]Universitat Autonoma de Barcelona, Barcelona, Spain

34 Lateral frontal cortex volume reduction in male adults with Tourette syndrome revealed by VBM

Matthias Wittfoth[1], Sarah Bornmann[2], Kirsten Müller-Vahl[2]
[1]of Neurology, Hannover Medical School;NICA (NeuroImaging and Clinical Applications), Hannover, Hannover, Germany, [2]Hannover Medical School, Hannover, Germany

35 Symptom provocation paradigms shed light on the pathophysiology of Obsessive Compulsive Disorder

Paula Banca[1], Fernando Pocinho[2], João Relvas[2], Sérgio Tafula[3], João Paulo Silva Cunha[3], Miguel Castelo-Branco[1]
[1]IBILI-Faculty of Medicine of University of Coimbra, Coimbra, Portugal, [2]Hospital of the University of Coimbra, Coimbra, Portugal, [3]IEETA / DETI, University of Aveiro, Aveiro, Portugal

36 Cortical Plasticity Following Surgical Cingulotomy for Obsessive-Compulsive Disorder

Sameer Sheth[1], Patrick Schweder[2], Christian Strong[1], Darin Dougherty[1], Emad Eskandar[1]
[1]Massachusetts General Hospital, Boston, MA, [2]University Of Oxford, Department Of Neurosurgery, Oxford, United Kingdom

37 Structural covariance of the neostriatum in obsessive-compulsive disorder

Carles Soriano-Mas[1], Ben Harrison[2], Jesus Pujol[3], Pino Alonso[4], Eva Real[4], Marina Lopez Sola[5], Hector Ortiz[3], Rosa Hernández-Ribas[4], Oren Contreras[6], Laura Blanco[6], Johan Deus[7], José Menchón[4], Narcis Cardoner[4]
[1]Instituto Carlos III. Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [2]Melbourne Neuropsychiatry Centre, The University of Melbourne, Melbourne, Australia, [3]CRC-Mar, Barcelona, Spain, [4]Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [5]IDIBELL, Barcelona, Spain, [6]CRC-Mar, IMIM, Barcelona, Spain, [7]Universitat Autonoma de Barcelona, Barcelona, Spain

38 An fMRI study with Towel of London paradigm in patients with obsessive-compulsive disorder

Guemsook Shim[1], Wi Hoon Jung[2], Aram Song[2], Byung Jik Kim[3], Eun-Hoe Goo[4], Jae Yeon Hwang[1], Sung Nyun Kim[1], Go-Eun Jang[5], Jun Soo Kwon[1]
[1]Department of Psychiatry, Seoul National University, College of Medicine, Seoul, Korea, Republic of, [2]Interdisciplinary Program in Neuroscience, College of Natural Sciences, Seoul National University, Seoul, Korea, Republic of, [3]Brain & Cognitive Sciences-WCU program, College of Natural Sciences, Seoul National University, Seoul, Korea, Republic of, [4]Department of Radiology and Clinical Research Institute, Seoul National University Hospital, Seoul, Korea, Republic of, [5]Clinical Cognitive Neuroscience Center, Neuroscience Institute, SNU-MRC, Seoul, Korea, Republic of

39 Neural correlates of treatment response in OCD: Effect of symptom dimensions

Rosa Hernández-Ribas[1,2], Carles Soriano-Mas[3], Jesus Pujol[4], Pino Alonso[1,2], CINTO SEGALÀS[1,2], Eva Real[1,2], Esther Via[1], Johan Deus[5], Marina Lopez Sola[6,2], Ben Harrison[7], José Menchón[1,2], Narcis Cardoner[1,2]
[1]Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [2]CIBERSAM, Barcelona, Spain, [3]Instituto Carlos III. Neuroscience Group. Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [4]IAT-CRC, Barcelona, Spain, [5]Universitat Autonoma De Barcelona, Barcelona, Spain, [6]IDIBELL, Barcelona, Spain, [7]Melbourne Neuropsychiatry Centre, The University of Melbourne, Melbourne, Australia

40 Cognitive Control of a Simple Mental Image in Patients with Obsessive-Compulsive Disorder

Orhan Kocak[1], Ayðegül Yılmaz[2], Cem Atbaðoðlu[2,3], Metehan Çiçek[4,3]
[1]Kırıkkale University Psychiatry Department, Kırıkkale, Turkey, [2]Ankara University Psychiatry Department, Ankara, Turkey, [3]Ankara University Brain Research Center, Ankara, Turkey, [4]Ankara University Physiology Department, Ankara, Turkey

41 White Matter Abnormalities in Pediatric Obsessive-Compulsive Disorder Brain

Jian Chen[1,2], Tim Silk[1], Amanda Wood[3], Marc Seal[1], Aldsdair Vance[4,5]
[1]Murdoch Childrens Research Institute, Melbourne, Australia, [2]Monash University, Melbourne, Australia, [3]University of Birmingham, Birmingham, United Kingdom, [4]Royal Children's Hospital, Melbourne, Australia, [5]University of Melbourne, Melbourne, Australia

42 The Relationship of Gray Matter Abnormalities to Cognitive deficits in Obsessive-Compulsive Disorder

Na Young Shin[1], Wi Hoon Jung[1], Jun Hwan Jang[2], Guemsook Shim[2], Hye Yoon Park[2], Jae Yeon Hwang[2], Sung Nyun Kim[2], Jun Soo Kwon[2]
[1]Clinical Cognitive Neuroscience Center, Neuroscience Institute, SNU-MCR, Seoul, Korea, [2]Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea

Disorders of the Nervous System

Parkinson's Disease and Movement Disorders

43 Mechanisms of perseveration of action in Parkinson's Disease**

Laura Hughes[1,2], Ellemarije Altena[1], Roger Barker[1], James Rowe[1,2]
[1]University of Cambridge, Cambridge, United Kingdom, [2]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom

44 Effects of Parkinson's disease and treatment on cortico-subcortical network functional connectivity**

David Cole[1], Bahram Mohammadi[2], Maria Milenkova[3], Katja Kollewe[4], Christoph Schrader[4], Amir Samii[2], Reinhard Dengler[4], Thomas Münte[5], Christian Beckmann[6]
[1]Imperial College London, London, United Kingdom, [2]INI, Hannover, Germany, [3]Dept. of Neurology, Medical University Sofia, Sofia, Bulgaria, [4]Department of Neurology, Hannover Medical School, Hannover, Germany, [5]Neurology, University of Lübeck, Lübeck, Germany, [6]Donders Centre for Cognitive Neuroimaging, Nijmegen, Netherlands

45 Mapping connectivity in the cortical-subcortical motor circuits of Parkinson's disease patients**

Mike Sharman[1,2], Romain Valabregue[1,2,3], Vincent Perlbarg[4], Linda Marrakchi-Kacem[5,6], Cécile Galléa[1,2], Cécile Zaros[7], André Troiano[8], Hartwig Siebner[9], Christine Klein[10], Alexis Brice[1,3,7], Stéphane Lehéricy[1,2,3]
[1]UMR-S975, CRICM-INSERM-UPMC, Paris, France, [2]Centre de NeuroImagerie de Recherche (CENIR), Hôpital Pitié-Salpêtrière, Paris, France, [3]CNRS UMR 7225, Paris, France, [4]UMR-S678, INSERM-UPMC, Laboratoire d'Imagerie Fonctionnelle, Paris, France, [5]NeuroSpin, CEA, Gif-Sur-Yvette, France, [6]IFR-49, Paris, France, [7]Département de Génétique et Cytogénétique, Hôpital Pitié-Salpêtrière, Paris, France, [8]Neurology Department, Royal Brisbane and Women's Hospital, Queensland, Australia, [9]Danish Research Centre for Magnetic Resonance, Hvidovre, Denmark, [10]Clinical and Molecular Neurogenetics, Department of Neurology, University of Luebeck, Luebeck, Germany

46 Why spasmodic dysphonia affects speech - an interventional structural and functional MRI study**

Christian Alexander Kell[1], Philippe Dejonckere[2], Katrin Neumann[3]
[1]Brain Imaging Center, Frankfurt, Germany, [2]Utrecht University Medical Center, Utrecht, Netherlands, [3]Goethe University, Frankfurt, Germany

47 Dopamine Synthesis and Resting Brain Activity in Parkinsonism Associated with Gaucher Disease**

Joseph Masdeu[1], Ozlem Goker-Alpan[1], Angela Ianni[1], Philip Kohn[1], Daniel Eisenberg[1], Grisel Lopez[1], Ellen Sidransky[1], Karen Berman[1]
[1]National Institutes of Health, Bethesda, MD

48 Motor performance in Friedreich ataxia correlates with diffusion changes of the dento-rubral tract**

Hamed Akhlaghi[1], Louise Corben[2], Nellie Georgiou-Karistianis[3], John Bradshaw[3], Elsdon Storey[4], Martin Delatycki[5], Gary Egan[6]
[1]Florey Neuroscience Institutes, Melbourne, Australia, [2]Bruce Lefroy Centre for Genetic Health Research, Murdoch Childrens Research Institute, Melbourne, Australia, [3]Experimental Neuropsychology Research Unit, School of Psychology and Psychiatry, Melbourne, Australia, [4]Department of Medicine (Neurosciences), Monash University (Alfred Hospital Campus) Prahran, Melbourne, Australia, [5]Department of Clinical Genetics, Austin Health, Melbourne, Australia, [6]Florey Neuroscience Institutes, Centre for Neuroscience, University of Melbourne, Melbourne, Australia

49 Subthalamic microlesion effect due to electrode insertion in Parkinson's disease: a fMRI study

Robert Jech[1], Karsten Müller[2], Dušan Urgošík[3], Tomáš Sieger[4], Štefan Holiga[2], Filip Růžička[3], Petr Dušek[1], Petra Havránková[1], Josef Vymazal[3], Evžen Růžička[1]
[1]Dept. of Neurology and Center for Clinical Neuroscience, 1st Faculty of Medicine, Charles University, Prague, Czech Republic, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]Dept. of Stereotactic Neurosurgery, Na Homolce Hospital, Prague, Czech Republic, [4]Dept. of Cybernetics, Faculty of Electrical Engineering, Czech Technical University, Prague, Czech Republic

50 Altered motor resting state fcMRI in Parkinson's Disease with forced exercise vs medication

Erik Beall[1], Jay Alberts[1], Anil Thota[1], Anneke Frankemolle[1], Micheal Phillips[1], Mark Lowe[1]
[1]Cleveland Clinic, Cleveland, OH, United States

51 White matter tract integrity and cognition in Parkinson's disease

Tracy Melzer[1], Richard Watts[2], Michael MacAskill[1], Toni Pitcher[1], Ross Keenan[3], Leslie Livingston[1], John Dalrymple-Alford[2], Tim Anderson[1]
[1]Van der Veer Institute/ University of Otago, Christchurch, New Zealand, [2]Van der Veer Institute/ University of Canterbury, Christchurch, New Zealand, [3]Christchurch Radiology Group, Christchurch, New Zealand

52 Impaired Emotion Recognition and Functional Correlates of Emotion Perception in Huntington's Disease

Imis Dogan[1,2,3], Christian Sass[1], Shahram Mirzazade[1,2,3], Alexandra Kleiman[1,2,3], Cornelius Werner[1,2], Ferdinand Binkofski[4,2,3], Jörg Schulz[1,2], Johannes Schiefer[1], N Shah[2,1,3], Kathrin Reetz[1,2,3]
[1]Department of Neurology, University Hospital RWTH Aachen, Aachen, Germany, [2]Institute of Neuroscience and Medicine, Research Center Jülich, Jülich, Germany, [3]Jülich-Aachen Research Alliance (JARA Brain) - Translational Brain Medicine, Jülich-Aachen, Germany, [4]Section for Neurological Cognition Research at the Department of Neurology, RWTH Aachen University, Aachen, Germany

53 Increased resting state connectivity in Spinocerebellar Ataxia type 7: an fMRI study

Sarael Alcauter[1,2], Victor Saenger[3], Rosalinda Díaz[4], Maria de Lourdes Martinez[1], Fernando Barrios[2], Juan Fernández-Ruiz[4]
[1]Instituto Nacional de Psiquiatría, INPRF, Mexico D.F., Mexico, [2]Universidad Nacional Autonoma de Mexico, QUERETARO, QRO, [3]Facultad de Ciencias, Universidad Nacional Autonoma de Mexico, Mexico D.F., Mexico, [4]Facultad de Medicina, Universidad Nacional Autonoma de Mexico, Mexico D.F., Mexico

54 Attentional control in Huntington's disease, an fMRI study

Marcus Gray[1], Ayaka Ando[1], Alicia Dymowski[1], Julie Stout[2], Andrew Churchyard[3], Phyllis Chua[4], Gary Egan[5], Nellie Georgiou-Karistianis[1]
[1]Monash University, Melbourne, Australia, [2]Monash University, Australia, [3]Melbourne University, Melbourne, Australia, [4]Alfred Psychiatry Research Centre, Monash University, Melbourne, VIC, [5]Florey Neuroscience Institutes & Centre for Neuroscience, Parkville, Australia

55 Alertness-related brain activation and functional connectivity in preclinical Huntington's disease

Robert Christian Wolf[1], Georg Grön[2], Fabio Sambataro[3], Nenad Vasic[2], Nadine Wolf[4], Carsten Saft[5], Philipp Thomann[6], Bernhard Landwehrmeyer[7], Michael Orth[7]
[1]University of Heidelberg, Department of General Psychiatry, Heidelberg, Germany, [2]Department of Psychiatry and Psychotherapy III, University of Ulm, Ulm, Germany, [3]Brain Center for Motor and Social Cognition, Italian Institute of Technology, Parma, Germany, [4]Central Institute of Mental Health, Mannheim, Germany, [5]Department of Neurology, University of Bochum, Bochum, Germany, [6]Center of Psychosocial Medicine, Department of General Psychiatry, University of Heidelberg, Heidelberg, Germany, [7]Department of Neurology, University of Ulm, Ulm, Germany

56 Striatal D2 receptor and GABAergic functions in early idiopathic restless legs syndrome

Yasuomi Ouchi[1], Shunsuke Yagi[1], Etsuji Yoshikawa[2], Masami Futatsubashi[2], Toshihiko Kanno[3], Yumi Oboshi[1], Satoshi Kono[1], Noriyoshi Nakai[4], Masanobu Sakamoto[3]
[1]Hamamatsu University School of Medicine, Hamamatsu, Japan, [2]Hamamatsu Photonics KK, Hamamatsu, Japan, [3]Hamamtsu Medical Center, Hamamatsu, Japan, [4]Nagoya Daini Red Cross Hospital, Nagoya, Japan

57 Initiation and inhibition of hand movement: cerebral activation in patients with Parkinson's disease

Carolien Toxopeus[1], Gopal Valsan[2], Bernard Conway[2], Johannes van der Hoeven[3], Klaus Leenders[1], Natasha Maurits[1], Bauke de Jong[1]
[1]University Medical Center Groningen, Dept. of Neurology, University of Groningen, Groningen, Netherlands, [2]University of Strathclyde, Bioengineering Unit, Glasgow, United Kingdom, [3]University Medical Center Groningen, Depts. of Neurology and Clinical Neurophysiology, Groningen, Netherlands

58 Dynamical causal modeling of beta synchrony in parkinsonian networks

Andre Marreiros[1], Rosalyn Moran[2], Karl Friston[2], Peter Brown[1]
[1]Department of Clinical Neurology, University of Oxford, London, United Kingdom, [2]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom

59 Altered corticostriatal connectivity in Huntington disease

christine delmaire[1,2,3], Romain Valabregue[4,3,5], Nicolas Menjot de Champfleur[2], Yulia Worbe[6], Alexandra Durr[7,5], Stéphane Lehéricy[4,8,5]
[1]Department of Neuroradiology, Lille,France, [2]Centre de Neuroimagerie de Recherche – CENIR, Pitie Salpetriere Hospital, Paris, France, [3]IFR49- Pitie Salpetriere Hospital, Paris, France, [4]CRICM-Centre de Neuroimagerie de Recherche – CENIR, Pitie Salpetriere Hospital, Paris, France, [5]Inserm U975- Pitie Salpetriere Hospital, Paris, France, [6]INSERM CIC 9503, Pitie Salpetriere Hospital, Paris, France, [7]Department of Genetics and Cytogenetics, and INSERM UMR S679,Pitie Salpetriere Hospital, Paris, France, [8]IFR 49- Pitie Salpetriere Hospital, Paris, France

60 Compensatory cognitive neural mechanism in healthy carriers of the PD related G2019S LRRK2 mutation

Avner Thaler[1], Noa Bregman[2], Anat Mirelman[3], Tanya Gurevich[3], Nir Giladi[4], Talma Hendler[5]
[1]Movement Diorder Unit, Department of Neurology, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel, [2]Department of Neurology, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel, [3]Movement Disorder Unit, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel, [4]Department of Neurology, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel, [5]Functional Brain Center, Wohl Institute for Advanced Imaging, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

61 Impairment of prefrontal activation and connectivity in Parkinson's Disease: An fMRI & DTI study

Sandra Evelyne Leh[1,2], Alain Ptito[3], Abbas Sadikot[2], Jen-Kai Chen[2], Marc Bohlken[4], Sonja Huntgeburth[2], Antonio Strafella[1,5]
[1]Toronto Western Hospital & Research Institute, University of Toronto, Toronto, Canada, [2]Montreal Neurological Institute, McGill University, Montreal, Canada, [3]Department of Psychology, McGill University Health Centre, Montreal, Canada, [4]VU University, Amsterdam, Netherlands, [5]PET Imaging Centre, Centre for Addiction and Mental Health, University of Toronto, Montreal, Canada

62 Cognitive profile affects fronto-striatal activation during set-shifting in Parkinson's disease

Oury Monchi[1], Atsuko Nagano-Saito[2], Claudine Habak[2], Beatriz Mejia-Constain[2], Thomas Jubault[2], Laura Monetta[3], Alain Ptito[4], Antonio Strafella[5]
[1]Functional Neuroimaging Unit, Montreal Geriatric's Institute, University of Montreal, Montreal, Canada, [2]Functional Neuroimaging Unit, Montreal Geriatric's Institute, University of Montreal, Montreal, Quebec, [3]Département de réadaptation, Université Laval, Quebec, Quebec, [4]Department of Psychology, McGill University Health Centre, Montreal, Canada, [5]CAMH, and Toronto Western Hospital, University of Toronto, Toronto, Canada

63 Dopaminergic Modulation of Resting State Networks in Parkinson's Disease
Kathleen Poston[1], William Shirer[1], Fadi Tayim[1], Vinod Menon[2], Michael Greicius[3]
[1]Stanford University, Stanford, CA, [2]Stanford University, Stanford, United States, [3]Stanford University Medical Center, Stanford, United States

64 Incidence of Cognitive Impairment in Cohorts with Longitudinal Evaluation-PD: Neuroimaging results
Cristina Nombela Otero[1], Adam Hampshire[2], David Breen[1], Tien Khoo Khoo[3], Michael Firbank[3], James Rowe[1,4], Adrian Owen[2], John O'Brien O'Brien[3], David Burn[3], Roger Barker[1]
[1]Clinical Neuroscience Department. Cambridge University, Cambridge, United Kingdom, [2]Centre for Brain and Mind. University of Western Ontario, London, Ontario, Canada, [3]Clinical Ageing Research Unit, Newcastle University, Newcastle upon Tyne, United Kingdom, [4]MRC-Cognition and Brain Sciences Unit, Cambridge, United Kingdom

65 Resting State Connectivity Patterns in Parkinson's Disease
Cornelius Werner[1,2], Imis Dogan[1], Alexandra Kleiman[1], Shahram Mirzazade[1], Claudia Rottschy[1], Christian Sass[1], Ferdinand Binkofski[1], Nadim Shah[3], Jörg Schulz[1], Kathrin Reetz[1]
[1]RWTH Aachen University, Dept. of Neurology, Aachen, Germany, [2]Institute of Neuroscience and Medicine, Research Centre Juelich, Juelich, Germany, [3]Institute of Neuroscience and Medicine, INM-4, Research Centre Julich, Juelich, Germany

66 Non-linear discriminant function analysis differentiates degenerative change in Huntington's Disease
Nellie Georgiou-Karistianis[1], Marcus Gray[1], Alicia Dymowski[1], Ayaka Ando[1], Leigh Johnston[2], India Bohanna[1], Julie Stout[3], Andrew Churchyard[4], Phyllis Chua[5], Gary Egan[6]
[1]Monash University, Melbourne, Australia, [2]University of Melbourne, VIC, Australia, [3]Monash University, Australia, [4]Melbourne University, Melbourne, Australia, [5]Alfred Psychiatry Research Centre, Monash University, Melbourne, VIC, [6]Florey Neuroscience Institutes, Centre for Neuroscience, University of Melbourne, Melbourne, Australia

67 In vivo thalamo-pontine cholinergic alterations in Progressive Supranuclear Palsy and Multiple Syst
Joachim MAZERE[1], Wassilios MEISSNER[2], Igor SIBON[2], Willy MAYO[3], Frederic LAMARE[4], Denis GUILLOTEAU[5], françois TISON[6], Michèle Allard[7]
[1]Université de Bordeaux, UMR CNRS 5287, [2]Service de Neurologie, CHU de Bordeaux, Hôpital Pellegrin, Place Amélie Raba Léon, 33076 Bordeaux, F, BORDEAUX, France, [3]Université de Bordeaux, UMR CNRS 5287, BORDEAUX, France, [4]Service de Médecine Nucléaire, CHU de Bordeaux, Hôpital Pellegrin, Place Amélie Raba Léon, 33076 Bor, BORDEAUX, France, [5]INSERM U619, Université François Rabelais, 2 bis Boulevard Tonnellé, 37032 Tours Cedex, France, TOURS, France, [6]UMR-CNRS 5227, Université Victor Segalen Bordeaux 2, 146 rue Léo Saignat, case 117, 33076 Bordeaux, BORDEAUX, France, [7]INCIA UMR CNRS 5287, Bordeaux, France

68 Cortical Thinning in Asymptomatic *Parkin* and *PINK1* Mutation Carriers?
Alexandra Kleiman[1,2,3], Ana Djarmati[4], Johann Hagenah[4], Hartwig Siebner[5], Christine Klein[4], Ferdinand Binkofski[2,3,6], Kathrin Reetz[1,2,3]
[1]Department of Neurology, University Hospital RWTH Aachen, Aachen, Germany, [2]Institute of Neuroscience and Medicine, Research Center Jülich, Jülich, Germany, [3]Jülich-Aachen Research Alliance (JARA – Brain), Jülich-Aachen, Germany, [4]Department of Neurology, University of Luebeck, Luebeck, Germany, [5]Danish Research Centre for Magnetic Resonance, Copenhagen University Hospital Hvidovre, Hvidovre, Denmark, [6]Section for Neurological Cognition Research at the Department of Neurology, RWTH Aachen University, Aachen, Germany

69 Gray matter volume in cortical motor areas correlated with symptoms severity in essential tremor
Lea Marais[1], Cécile Gallea[1], Traian Popa[1], Sabine Meunier[1], Stéphane Lehéricy[1], Marie Vidailhet[1]
[1]CRICM, Paris, France

70 Neural atrophy associated with Impulse Control Disorders (ICDs) in Parkinson's disease: a VBM study
Mauro Plebani[1], Roberta Biundo[1], Patrizia Formento-Dojot[1], Laura Bernardi[1], Luca Ghezzo[1], Luciano Foscolo[1], Francesca Meneghello[1], Annalena Venneri[1,2], Angelo Antonini[1,3]
[1]IRCSS San Camillo, Venice, Italy, [2]University of Hull, Hull, United Kingdom, [3]University of Padua, Padua, Italy

71 TBSS Analysis in MSA-P and MSA-C Reveals Widespread White Matter Alterations
Aaron Rulseh[1], Jiõ Keller[1,2], Robert Rusina[3], Kateõna Zárubová[4], Hana Brožová[5], Petra Havránková[5], Josef Vymazal[1,5]
[1]Dept. of Radiology, Na Homolce Hospital, Prague, Czech Republic, [2]Charles University in Prague, 3rd Faculty of Medicine, Prague, Czech Republic, [3]Dept. of Neurology, Faculty Thomayer Hospital, Prague, Czech Republic, [4]Dept. of Neurology, Charles University in Prague, 2rd Faculty of Medicine, Prague, Czech Republic, [5]Dept. of Neurology, Charles University in Prague, 1st Faculty of Medicine, Prague, Czech Republic

72 Resting State fMRI in Parkinson's Disease
Minjie Wu[1], Tanya Simuni[1], Todd Parrish[2], Becky Stell[1], Darren Gitelman[1,2]
[1]Neurology, Northwestern University, Chicago, IL, [2]Radiology, Northwestern University, Chicago, IL

73 The relationship between walking speed and brain volume in Type 2 Diabetes Mellitus
Brad Manor[1,2], Ervin Sejdic[3], Heli Valkeinen[3], Vera Novak[3]
[1]Beth Israel Deaconess Medical Center, [2]Harvard Medical School, Boston , MA, [3]Beth Israel Deaconess Medical Center, Boston, MA

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74 Alteration of resting state functional connectivity in de novo Parkinson's disease
Bumhee Park[1,2], Phil Hyu Lee[3], MaengKeun Oh[2], Jong Doo Lee[2,1], Hae-Jeong Park[2,1]
[1]Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Radiology and Division of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Department of Neurology and Brain Research Institute, Yonsei University College of Medicine, Seoul, Korea, Republic of

75 Altered functional connectivity and small-worldness in hemiplegia
Bumhee Park[1,2], MaengKeun Oh[2], Jong Doo Lee[2,1], Hae-Jeong Park[2,1]
[1]Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Radiology and Division of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of

76 DTI and VBM findings in Pantothenate Kinase-Associated Neurodegeneration (PKAN) Dystonia
Peter Stoeter[1], Rea Rodriguez-Raecke[2], Paulo Dellani[3], Pedro Roa-Sanchez[4], Herwin Speckter[4], Rafael Fermin-Delgado[4], Eddy Perez-Then[4], Arndt Rolfs[5], Bernd Foerster[6]
[1]Hospital CEDIMAT, Santo Domingo, Dominican Republic, [2]Medizinische Hochschule, Hannover, Germany, [3]Universitäts-Medizin, Mainz, Germany, [4]CEDIMAT Hospital, Santo Domingo, Dominican Republic, [5]Albrecht-Kossel-Insttut, Rostock, Germany, [6]Philips Medical Systems, São Paulo - SP, Brazil

77 Impaired activation of somatosensory cortex as fMRI correlate of limb-kinetic apraxia
Thomas Foki[1,2], Dietrich Haubenberger[3,4], Walter Pirker[3], Alexander Geissler[1,2], Markus Hilbert[1,2], Ilse Höllinger[1,2], Katharina Merksa[1,2], Moritz Wurnig[1,2], Jakob Rath[1,5], Johann Lehrner[3], Siegfried Trattnig[5,2], Eduard Auff[3], Roland Beisteiner[1,2]
[1]Study Group Clinical fMRI, Department of Neurology, Medical University of Vienna, Vienna, Austria, [2]MR Center of Excellence, Medical University of Vienna, Vienna, Austria, [3]Department of Neurology, Medical University of Vienna, Vienna, Austria, [4]Human Motor Control Section, Medical Neurology Branch, NINDS, NIH, Bethesda, Bethesda, MD, [5]Department of Radiology, Medical University of Vienna, Vienna, Austria

Disorders of the Nervous System

Schizophrenia and Psychotic Disorders

78* A disrupted affective pathway in adolescent schizophrenia offspring evidenced using fMRI and DCM, (O-T1)
Sunali Wadehra[1], Simon Eickhoff[2], Patrick Pruitt[3], Vaibhav Diwadkar[1]
[1]Wayne State University School of Medicine, Detroit, MI, [2]RWTH Aachen University, Aachen, Germany, [3]University of Michigan, Ann Arbor, MI

79* Abnormal Prediction Error signaling and dopamine levels in subjects at Ultra-High Risk of psychosis, (O-T1)
Christopher Chaddock[1], Oliver Howes[2], Jon Roiser[3], Philip McGuire[1]
[1]King's College London, Institute of Psychiatry, London, United Kingdom, [2]King's College London, Institute of Psychiatry; PET Psychiatry Centre, MRC Clinical Sciences Centre, London, United Kingdom, [3]Institute of Cognitive Neuroscience, University College London, London, United Kingdom

80 The neurobiology of the psychosis continuum: Evidence from working memory fMRI**
Christine Lycke Brandt[1], Tom Eichele[2], Ingrid Melle[3,1], Kjetil Sundet[1,4], Ingrid Agartz[3,5,6], Kenneth Hugdahl[2,7], Jimmy Jensen[8,1,3], Ole Andreassen[3,1]
[1]Division of Mental Health and Addiction, Oslo University Hospital, Oslo, Norway, [2]Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway, [3]Institute of Clinical Medicine, University of Oslo, Oslo, Norway, [4]Department of Psychology, University of Oslo, Oslo, Norway, [5]Department of Clinical Neuroscience, Psychiatry Section, Karolinska Institutet, Stockholm, Sweden, [6]Department of Psychiatric Research, Diakonhjemmet Hospital, Oslo, Norway, [7]Division of Psychiatry, Haukeland University Hospital, Bergen, Norway, [8]Department of Psychiatry and Psychotherapy, Charité Universitätsmedizin, Berlin, Germany

81 Source Based Morphometry Analysis of Group Differences in Fractional Anisotropy in Schizophrenia**
Chris Abbott[1], Nora Perrone-Bizzozero[2], Jin Sui[3], Jeremy Yamamoto[3], Arvind Caprihan[4], Godfrey Pearlson[5], Vince Calhoun[3]
[1]University of New Mexico, [2]University of New Mexico, Albuquerque, NM, [3]Mind Research Network, Albuquerque, NM, [4]MIND Research Network, Abuquerque, United States, [5]Hartford Hospital, Hartford, CT

82 Gene Dosage and Default Mode Network in Schizophrenia**
Su-Chun Huang[1,2], Chih-Min Liu[3], Hai-Go Hwu[3], Chen-Chung Liu[3], Fa-Hsuan Lin[1], Wen-Yih Tseng[2,1]
[1]Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan, Republic of China, [2]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [3]Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan, Republic of China

83 **Functional connectivity within limbic and paralimbic regions associated with criminal psychopathy**
Michelle Juarez[1], Kent Kiehl[1], Vince Calhoun[1]
[1]Mind Research Network, Albuquerque, NM

84 **Alterations in functional and structural connectivity in paranoid schizophrenia**
Sophia Mueller[1], Daniel Keeser[2], Kristina Hennig-Fast[2], Christina Fuchs[3], Ute Coates[4], Maximilian Reiser[4], Thomas Meindl[5]
[1]Institute of Clinical Radiology, [2]Department of Psychiatry and Psychotherapy, Ludwig-Maximilian University, Munich, Germany, [3]Department of Psychiatry and Psychotherapy, Ludwig-Maximilian University, Muich, Germany, [4]Institute of Clinical Radiology, University Hospitals Munich, Munich, Germany, [5]University Munich, Munich, Germany

85 **Local Cortical Gyrification Changes in Schizophrenia and Effects of Genetic Liability**
Shantanu Joshi[1], Keith Nuechterlein[2], Roger Woods[1], Owen Phillips[1], Robert Asarnow[2], Arthur Toga[1], Katherine Narr[1]
[1]Laboratory of Neuro Imaging, UCLA, Los Angeles, United States, [2]Departments of Neurology and Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, United States

86 **Cortical Gray Matter Mean Diffusivity Increases in Schizophrenia**
Owen Phillips[1], Kristi Clark[1], Roger Woods[2], Robert Asarnow[2], Keith Nuechterlein[2], Arthur Toga[3], Katherine Narr[4]
[1]UCLA, Los Angeles, CA, [2]UCLA, LOS ANGELES, CA, [3]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [4]Laboratory of Neuroimaging, UCLA School of Medicine, Los Angeles, CA

87 **Genomic risk for schizophrenic brain function analyzed by Parallel-ICA**
Jiayu Chen[1], Jingyu Liu[2], Vince Calhoun[2]
[1]University of New Mexico, [2]The Mind Research Network, Albuquerque, United States

88 **Effective connectivity of language circuitry in schizophrenia patients with auditory hallucinations**
Branislava Curcic-Blake[1], Edith Liemburg[2], Ans Vercammen[3], Marte Swart[2], Rikus Knegtering[4], Richard Bruggeman[2], Andre Aleman[5]
[1]University Medical Center Groningen, Netherlands, [2]University Medical Center Groningen, Groningen, Netherlands, [3]Prince Of Wales Medical Research, Australia, [4]Lentis, Groningen, Netherlands, [5]BCN NeuroImaging Center, Groningen, Netherlands

89 **BDNF Genetic Variation Predicts Hippocampal Activation in Medication-Free Schizophrenia Patients**
Daniel Eisenberg[1], Angela Ianni[1], Philip Kohn[1], Bhaskar Kolachana[1], Jose Apud[1], Daniel Weinberger[1], Karen Berman[1]
[1]National Institutes of Health, Bethesda, MD

90 **Effective connectivity of AKT1 working memory networks and pharmacogenetics in schizophrenia**
Hao Yang Tan[1], Anthony Chen[2], Bhaskar Kolachana[2], Jose Apud[3], Venkata Mattay[2], Joseph Callicott[2], Qiang Chen[2], Daniel Weinberger[2]
[1]nimh, [2]NIMH, Bethesda, United States, [3]National Institutes of Health, Bethesda, MD

91 **Altered Structural Brain Developmental Trajectory in Youth at Clinical Risk for Psychosis**
Daqiang Sun[1], Theo van Erp[2], Kathleen Chak[1], Wendy Lau[1], Leila Kushan[1], Carrie Bearden[1], Sarah Jacobson[1], Arthur Toga[3], Paul Thompson[3], Tyrone Cannon[1]
[1]Departments of Psychology & Psychiatry and Biobehavioral Sciences, UCLA, Los Angeles, United States, [2]Department of Psychiatry and Human Behavior, UC Irvine, Irvine, United States, [3]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States

92 **Brain structure changes in schizophrenia patients: correlation with disease duration and functional**
Thomas Nickl-Jockschat[1], Alena Pagel[2], Angela R. Laird[3], Frank Schneider[4], Peter Fox[5], Simon Eickhoff[6]
[1]RWTH Aachen University, [2]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [3]Research Imaging Center, University of Texas Health Science Center at San Antonio, San Antonio, TX, [4]RWTH Aachen University, Department of Psychiatry, Psychotherapy and Psychosomatics, Aachen, Germany, [5]Research Imaging Center, UT Health Science Center, San Antonio, TX, [6]Department of Psychiatry and Psychotherapy, Aachen, Germany

93 **Functional Imaging of the Sensory Gating Response in Schizophrenia**
Andrew Mayer[1,2], David Ruhl[1], Flannery Merideth[1], Faith Hanlon[1], Juan Bustillo[2], Jose Canive[2]
[1]The Mind Research Network, Albuquerque, United States, [2]University of New Mexico, Albuquerque, United States

94 **Withdrawn**

95 **Distributed brain activity during working memory can be used to classify first-episode schizophrenia**
Ayna Nejad[1,2], Kristoffer Madsen[1], Bjørn Ebdrup[2], Hartwig Siebner[1], Hans Rasmussen[2], Bodil Aggernaes[2], Birte Glenthøj[2], William Baaré[1]
[1]Danish Research Centre for Magnetic Resonance, Copenhagen University Hospital, Hvidovre, Denmark, [2]Center for Clinical Intervention and Neuropsychiatric Schizophrenia Research, Copenhagen, Denmark

96 **Reduced Connectivity in the Self-reflection Network of Schizophrenia Patients with Poor Insight**
Etith Liemburg[1], Lisette Van Der Meer[2], Marte Swart[1], Branislava Curcic-Blake[3], Rikus Knegtering[4], Andre Aleman[5]
[1]University Medical Center Groningen, Groningen, Netherlands, [2]BCN-Neuroimaging Center, Netherlands, [3]University Medical Center Groningen, Netherlands, [4]Lentis, Groningen, Netherlands, [5]BCN NeuroImaging Center, Groningen, Netherlands

97 Progressive degeneration of thalamocortical circuitry in schizophrenia
Derin Cobia[1], Matthew Smith[1], Lei Wang[1], John Csernansky[1]
[1]Northwestern University Feinberg School of Medicine, Chicago, IL, United States

98 Auditory hallucinations and external auditory stimulation: a meta-analysis of neuroimaging studies
Kristiina Kompus[1], Rene Westerhausen[1], Kenneth Hugdahl[2]
[1]University of Bergen, Bergen, Norway, [2]Division of Psychiatry and Bergen Mental Health Center, Haukeland University Hospital, Bergen, Norway

99 Using MVPA of fMRI Data at Encoding to Predict Subsequent Memory in Patients with Psychosis
Kristen Haut[1], Theo van Erp[2], Carrie Bearden[1], Tyrone Cannon[1]
[1]University of California, Los Angeles, Los Angeles, United States, [2]University of California, Irvine, Irvine, CA

100 Disrupted Functional Small-World Network for Spatial Working Memory in Schizophrenia Patients
Seung Suk Kang[1], Angus MacDonald III[1], Matthew Chafee[1], Chang-Hwan Im[2], Selin Aviyente[3], Edward Bernat[4], Scott Sponheim[5]
[1]University of Minnesota, Minneapolis, MN, [2]Hanyang University, Seoul, Korea, Republic of, [3]Michigan State University, East Lansing, MI, [4]Florida State University, Tallahassee, FL, [5]Department of Psychiatry and the Center for Magnetic Resonance Research, University of Minnesota, Minneapolis, MN

101 Evidence for aberrant salience processing in unmedicated schizophrenia patients
Benjamin Wagner[1], Martin Voss[1], Björn Schott[1,2], Torsten Wüstenberg[1], Joachim Behr[1,3]
[1]Department of Psychiatry and Psychotherapy, Charité University, Berlin, Germany, [2]Leibniz Institute for Neurobiology, Magdeburg, Germany, [3]Institute of Neurophysiology, Charité University, Berlin, Germany

102 Glu, NAA and GABA levels in Hippocampus in Schizophrenia as measured by 3T 1H-MRS
Yan Fang[1], Perry Mihalakos[1], Ana Stan[1], Carol Tamminga[1], Changho Choi[1]
[1]UT Southwestern, Dallas, TX

103 Genetic background of Gamma (40Hz)-Oscillations: The role of Neuregulin 1 and ErbB4
Christoph Mulert[1,2,3], Gregor Leicht[1,2], Ina Giegling[1], Susanne Karch[1], Oliver Pogarell[1], Ulrich Hegerl[4], Dan Rujescu[1]
[1]Department of Psychiatry, Munich, Germany, [2]Department of Psychiatry, Hamburg, Germany, [3]Neuroimage Nord (NIN), Hamburg, Germany, [4]Department of Psychiatry, Leipzig, Germany

104 Striatal activation during salience attribution and reward in first episode schizophrenia patients
Christine Esslinger[1], Peter Kirsch[1], Susanne Englisch[1], Dragos Inta[1], Franziska Rausch[1], Wadim Bowl[2], Dagmar Gass[1], Daniela Mier[1], Andreas Meyer-Lindenberg[1], Mathias Zink[1]
[1]Central Institute of Mental Health, Mannheim, Germany, [2]Justus Liebig University, Giessen, Germany

105 A combined fMRI and 1H-MR Spectroscopy (MRS) study of the hippocampus in schizophrenia
Nathan Hutcheson[1], David White[1], Meredith Reid[1], Kathy Avsar[1], Jan den Hollander[1], Adrienne Lahti[1]
[1]University of Alabama at Birmingham, Birmingham, AL

106 Neural activity in schizophrenia patients and healthy controls during associative memory encoding
Paul Metzak[1,2], Alex Leung[1,2], Todd Woodward[1,2]
[1]University of British Columbia, Vancouver, Canada, [2]BC Mental Health and Addictions Research Institute, Vancouver, Canada

107 Amplitude of low frequency fluctuations test-retest reliability in schizophrenia
Jessica Turner[1], Christopher Abbott[2], Hongji Chen[1], Andrew Mayer[1], Elena Allen[1], Juan Bustillo[2]
[1]Mind Research Network, Albuquerque, NM, United States, [2]University of New Mexico, Albuquerque, NM, United States

108 White Matter Alterations in VCFS/22q11.2DS Patients with and without Prodromal Symptoms and Siblings
Petya Radoeva[1], Ioana Coman[1], Kevin Antshel[1], Wanda Fremont[1], Christopher McCarthy[1], Ashwini Kotkar[1], Robert Shprintzen[1], Wendy Kates[1]
[1]SUNY Upstate Medical University, Syracuse, NY

109 Proton Magnetic Resonance Spectroscopy of the Substantia Nigra in Schizophrenia
Meredith Reid[1], Nina Kraguljac[1], David White[1], Kathy Avsar[1], Jan den Hollander[1], Adrienne Lahti[1]
[1]University of Alabama at Birmingham, Birmingham, AL, United States

110 Characterization of the Failure of Deactivation in Default Mode Network in Schizophrenia
Kayako Matsuo[1], S.H. Annabel Chen[2], Chih-Min Liu[3], Chen-Chung Liu[3], Hai-Go Hwu[3], Wen-Yih Isaac Tseng[1]
[1]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, Republic of China, [2]Division of Psychology, School of Humanities and Social Sciences, Nanyang Technological University, Singapore, Singapore, [3]Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan, Republic of China

111 Probabilistic independent component analysis of fractional anisotropy maps in schizophrenia
René Mandl[1], Martijn van den Heuvel[1], Heleen Boos[1], Wiepke Cahn[1], René Kahn[1], Hilleke Hulshoff Pol[1]
[1]Rudolf Magnus Institute of Neuroscience, University Medical Center Utrecht, Utrecht, Netherlands

112 An fMRI investigation of delay discouting in schizophrenia
Kathy Avsar[1], David White[2], Meredith Reid[3], Mark Bolding[4], Luke Stoeckel[5], James Cox[1], Rosalyn Weller[1], Adrienne Lahti[2]
[1]Department of Psychology, University of Alabama at Birmingham, Birmingham, AL, [2]Neuroimaging and Translational Research Lab, University of Alabama at Birmingham, Birmingham, AL, [3]Department of Biomedical Engineering, University of Alabama at Birmingham, Birmingham, AL, [4]Department of Vision Sciences, University of Alabama at Birmingham, Birmingham, AL, [5]Department of Psychiatry, Massachusetts General Hospital, Boston, MA

113 PhMRI study of endocannabinoid involvement in working memory function in schizophrenia
Matthijs Bossong[1], Johan Jansma[2], Hendrika van Hell[1], Gerry Jager[3], Nick Ramsey[4]
[1]RMI, UMC Utrecht, Utrecht, Netherlands, [2]Rudolf Magnus Institute, UMC Utrecht, Utrecht, Netherlands, [3]Division of Human Nutrition, Wageningen University, Wageningen, Netherlands, [4]Rudolf Magnus Institute, Utrecht, Netherlands

114 Sex, age and illness duration affect gyrification index in schizophrenia
Adham Mancini-Marie[1], Uicheul Yoon[2], Jose Jiminez[3], Cherine Fahim[4], Stephane Potvin[3], Joshua Grant[5], Danièle Laverdure-Dupont[6], Audrey-Anne Dubé[6], Carine Betrisey[7], Pierre Rainveille[8], Alan Evans[9], Emmanuel Stip[10], Adrianna Mendrek[11]
[1]Fernand Seguin Research Centre, L-H Lafontaine Hospital, University of Montreal, Montreal; Canada, [2]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, [3]Centre de Recherche Fernand-Seguin, L-H Lafontaine Hospital, University of Montreal, Montreal, Canada, [4]University of Lausanne, Lausanne, Switzerland, [5]Universite De Montreal, Montreal, Canada, [6]Research Center (CRIUGM), University of Montreal, Montreal, Canada, [7]Department of Psychology, University of Fribourg, Fribourg, Switzerland, [8]Department of Stomatology, Faculty of Dentistry, University of Montreal, Montreal, Canada, [9]McConnell Brain Imaging Center, Montreal Neurological Institute, McGill University, Montreal, Quebec, [10]Department of Psychiatry, Faculty of Medicine, University of Montreal, Montreal, Canada, [11]Centre de Recherche Fernand-Seguin, Montreal, Canada

115 Plasticity in syllable encoding and articulatory memory in schizophrenia after cognitive training
Ethan Brown[1], Corby Dale[2], Anne Findlay[2], Srikantan Nagarajan[2], Mary Vertinski[3], Sophia Vinogradov[2], Alexander Herman[2]
[1]University of California, San Francisco, San Francisco, USA, [2]University of California, San Francisco, San Francisco, CA, [3]San Francisco Veteran's Affairs Medical Center, San Francisco, CA

116 Ventricular enlargement's effect on cortical, thalamic, and striatal volume in schizophrenia
Guillermo Horga[1], Javier Bernacer-Maria[2], William Byne[3], King-Wai Chu[4], Jonathan Entis[3], Erin Hazlett[5], Mehmet Haznedar[3], Eileen Kemether[3], Monte Buchsbaum[6]
[1]Department of Psychiatry, Barcelona, Spain, [2]University Of Cambridge, United Kingdom, [3]Mount Sinai School of Medicine, New York, NY, [4]Weill Medical College of Cornell University, New York, NY, [5]J.J.P. VA Medical Center, New York, NY, [6]University of California, San Diego, San Diego, CA

117 Blunted affect, hallucinations and emotional memory in schizophrenia men and women: an fmri study
Nadia Lakis[1,2], Julie Champagne[1,2], Josiane Bourque[1,2], Marc Lavoie[1,2], Adrianna Mendrek[1,2]
[1]Centre de Recherche Fernand-Seguin, Montreal, QC, Canada, [2]Université de Montréal, Département de Psychiatrie, Montreal, QC, Canada

118 Withdrawn

119 Electrophysiological abnormalities during visual perception as a core dysfunction in schizophrenia
Ivan Koychev[1], Wael El-Deredy[2], Corinna Haenschel[3], Tirthankar Mukherjee[1], Bill Deakin[1]
[1]The University of Manchester, Manchester, United Kingdom, [2]University Of Manchester, Manchester, United Kingdom, [3]The University of Bangor, Welsh Institute of Cognitive Neuroscience, School of Psychology, Bangor, United Kingdom

120 Cortical folding in relates to obstetric complications in schizophrenia and healthy controls
Unn Kristin Haukvik[1], Marie Schaer[2], Ragnar Nesvåg[1], Thomas McNeil[3], Cecilie Hartberg[4], Erik Jönsson[5], Stephan Eliez[6], Ingrid Agartz[1]
[1]University of Oslo, Oslo, Norway, [2]Service MÃ©dico-PÃ©dagogique, GenÃ¨ve 8, Switzerland, [3]Lund University, Lund, Sweden, [4]Institute of Clinical Medicine, University of Oslo, Oslo, Norway, [5]Karolinska Institute, Stockholm, Sweden, [6]Office Médico-Pédagogique Research Unit, Department of Psychiatry, University of Geneva, Geneva, Switzerland

121 Neural correlates of reward processing in individuals with schizophrenia and healthy controls
Muriah Wheelock[1], David White[2], Meredith Reid[2], Nathan Hutcheson[2], Kathy Avsar[2], Adrienne Lahti[2]
[1]University of Alabama at Birmingham, Birmingham, United States, [2]University of Alabama at Birmingham, Birmingham, United States

122 Abnormal brain activation during emotion processing in healthy siblings of schizophrenia patients
Mariët van Buuren[1], Matthijs Vink[1], Anca Rapcencu[1], René Kahn[1]
[1]Rudolf Magnus Institute of Neuroscience, University Medical Center Utrecht, Utrecht, Netherlands

123 Withdrawn

124 Auditory evoked potentials in a sensory gating task in adolescents with 22q11 deletion syndrome
Tonia Rihs[1], Juliane Britz[1], Stephan Eliez[2], Sarah Menghetti[2], Vincent Rochas[1], Maude Schneider[2], Christoph Michel[3,4]
[1]Functional Brain Mapping Laboratory, Dept. of Fundamental Neurosciences, University of Geneva, Geneva, Switzerland, [2]Office Médico-Pédagogique Research Unit, Department of Psychiatry, University of Geneva, Geneva, Switzerland, [3]University Hospital, Geneva, Switzerland, [4]Functional Brain Mapping Laboratory, Dept. of Fundamental Neurosciences, University of Geneva, Geneva, Switzerland

125 Alterations in Thalamo-Frontal Anatomical Pathway to Subjects at Ultra High Risk for Psychosis
Hyun Jung Han[1], Jungsu S. Oh[2], Wi Hoon Jung[2], Aram Song[2], Joon Hwan Jang[3], Hye-Yoon Park[3], Geumsook Shim[3], Jun Soo Kwon[3]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Clinical Cognitive Neuroscience Center, Neuroscience Institute, SNU-MRC, Seoul, Korea, Republic of, [3]Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea, Republic of

126 Orbitofrontal cortex sulcogyral patterns in people at ultra high risk for psychosis
Suzie Lavoie[1], Cali Bartholomeusz[2], Barnaby Nelson[1], Sarah Whittle[2,1], Patrick McGorry[1], Christos Pantelis[2], Alison Yung[1], Stephen Wood[2,3]
[1]Orygen Youth Health Research Centre, University of Melbourne, Melbourne, Australia, [2]Melbourne Neuropsychiatry Centre, University of Melbourne, Melbourne, Australia, [3]School of Psychology, University of Birmingham, Edgbaston, United Kingdom

127 Aberrant Auditory Processing and its relation to grey matter volume in ultra-high-risk for psychosis
Kyungsoon Shin[1], Yuri Koh[1], June Sic Kim[2], Joon Hwan Jang[3], Geumsook Shim[3], Hye Yoon Park[3], Jae Yeon Hwang[3], Sung Nyun Kim[3], Wi Hoon Jung[4], Chun Kee Chung[2], Jun Soo Kwon[3]
[1]Clinical Cognitive Neuroscience Center, Seoul, Korea, Republic of, [2]MEG Center, Department of Neurosurgery, Seoul National University College of Medicine, Seoul, Korea, Republic of, [3]Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea, Republic of, [4]Clinical Cognitive Neuroscience Center, Neuroscience Institute, SNU-MRC, Seoul, Korea, Republic of

128 Dorso-lateral prefrontal GABA predicts individual differences in rash impulsivity
Petroc Sumner[1], Frederic Boy[2], John Evans[3], Richard Edden[4], Andrew Lawrence[2], Krish Singh[5]
[1]Cardiff University, [2]Cardiff University, Cardiff, United Kingdom, [3]Cardiff University Brain Research Imaging Centre, Cardiff, United Kingdom, [4]Russell H Morgan. Johns Hopkins University, School of Medicine, Baltimore, United States, [5]Cardiff University, Cardiff, Wales

129 Brain structure relationships with cognition in schizophrenia, bipolar disorder and healthy controls
Cecilie Hartberg[1], Kjetil Sundet[2], Lars M. Rimol[3], Unn Kristin Haukvik[3], Elisabeth Lange[2], Ragnar Nesvåg[2], Anders Dale[4], Ingrid Melle[5], Ole Andreassen[5], Ingrid Agartz[2]
[1]Institute of Clinical Medicine, University of Oslo, Oslo, Norway, [2]University of Oslo, Oslo, Norway, [3]University of Oslo, [4]Department of Neurosciences and Department of Radiology, University of California San Diego, San Diego, CA, [5]Institute of Clinical Medicine, Division of Mental Health and Addiction, University of Oslo, Oslo, Norway

130 Verbal thought generation and auditory perception in schizophrenia: a follow-up fMRI study
Lucile Rapin[1], Paul Metzak[2], Jennifer Whitman[2], Marion Dohen[1], Hélène Loevenbruck[1], Todd Woodward[3]
[1]DPC, GIPSA-lab, UMR 5216, CNRS, Université de Grenoble, Grenoble, France, [2]UBC, Vancouver, Canada, [3]University of British Columbia, Vancouver, Canada

131 Reading-Disorder genes modulate resting-state fMRI in language-related regions in controls and schizophrenia
Sharna Jamadar[1], Natalie Powers[2], Shashwath Meda[3], Jeffrey Gruen[2], Joel Gelernter[2], Godfrey Pearlson[4]
[1]Institute of Living, Hartford, CT, [2]Yale University, New Haven, CT, [3]Vanderbilt University, Nashville, TN, [4]Hartford Hospital, Hartford, CT

132 Surface deformation-based analysis of subcortical structures in childhood-onset schizophrenia
M. Mallar Chakravarty[1], Armin Raznahan[2], Jay Giedd[2], Judith Rapoport[2], D. Louis Collins[3], Jason Lerch[1], Nitin Gogtay[2]
[1]Mouse Imaging Centre, The Hospital for Sick Children, Toronto, Ontario, [2]NIMH, NIH, Bethesda, United States, [3]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Canada

133 Neural correlates of emotion regulation in patients with schizophrenia and first-degree relatives
Jorien van der Velde[1], Lisette Van Der Meer[1], Marte Swart[2], Durk Wiersma[2], Richard Bruggeman[2], A. Aleman[3]
[1]BCN-Neuroimaging Center, Groningen, Netherlands, [2]University Medical Center Groningen, Groningen, Netherlands, [3]Neuroimaging Center, RuG and UMC Groningen, Groningen, Netherlands

134 Reduced high frequency gamma synchronization and auditory hallucination symptoms in schizophrenia
Rikako Tsuchimoto[1], Shogo Hirano[2], Yoji Hirano[2], Itta Nakamura[2], Yuko Oda[2], Toshiaki Onitsuka[2], Naoya Oribe[2], Takefumi Ueno[2]
[1]Kyushu University, Fukuoka,Japan, [2]Kyushu University, Fukuoka, Japan

135 Altered default-mode network activity in schizophrenia: a resting state fMRI study
Gianluca Mingoia[1], Gerd Wagner[1], kerstin Langbein[1], Sigrid Scherpiet[1], Ralf Schloesser[1], Christian Gaser[2], Heinrich Sauer[1], Igor Nenadic[1]
[1]Department of Psychiatry, Friedrich-Schiller University of Jena, Jena, Germany, [2]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Jena, Germany

136 Effective connectivity of the striatum during reward prediction error in schizophrenia
David White[1], Muriah Wheelock[1], Nathan Hutcheson[1], Kathy Avsar[1], Meredith Reid[1], Luke Stoeckel[2], Adrienne Lahti[1]
[1]University of Alabama at Birmingham, Birmingham, AL United States, [2]Massachusetts General Hospital, Boston, MA United States

137 An investigation of activation patterns during misidentification of emotional faces in schizophrenia
Janina Seubert[1], James Loughead[1], Kosha Ruparel[1], Theodore Satterthwaite[1], Amy Pinkham[2], Jeffrey Valdez[1], Raquel Gur[1], Ruben Gur[1]
[1]University of Pennsylvania, Philadelphia, PA, [2]Southern Methodist University, Dallas, TX

138 Progesterone and cerebral function during emotion processing in men and women with schizophrenia
Julie Champagne[1], Nadia Lakis[1], Josiane Bourque[1], Adrianna Mendrek[1]
[1]Centre de Recherche Fernand-Seguin, Montreal, Canada

139 Mesolimbic metabolism during hallucination-like auditory stimulation in remitted schizophrenia
Guillermo Horga[1], Emilio Fernandez-Egea[2], Eduard Parellada[3], Anna Konova[4], Anna Mane[5], Mireia Font[3], Francisco Lomena[3], Bernardo Miguel[3]
[1]Columbia University, New York, United States, [2]University of Cambridge, Cambridge, United Kingdom, [3]Hospital Clinic of Barcelona, Barcelona, Spain, [4]Stony Brook University, Stony Brook, NY, [5]Centre Forum, Barcelona, Spain

140 Neural Correlates of Cognitive Behavioural Therapy Effects on Patients with Schizophrenia
Maurice Cabanis[1], Axel Krug[1], Martin Pyka[1], Henrik Walter[2], Georg Winterer[3], Bernhard Müller[4], Jutta Herrlich[5], Georg Wiedemann[6], Kai Vogeley[7], Stefan Klingberg[8], Alexander Rapp[8], Andreas Wittorf[8], Kircher Tilo[1]
[1]Department of Psychiatry and Psychotherapy, Philipps-University Marburg, Marburg, Germany, [2]Department of Psychiatry and Psychotherapy Charité University Medicine, Berlin, Germany, [3]Department of Psychiatry and Psychotherapy, Heinrich Heine University Düsseldorf, Düsseldorf, Germany, [4]Department of Psychiatry and Psychotherapy, University of Duisburg-Essen, Essen, Germany, [5]Department of Psychiatry and Psychotherapy, Johann Wolfgang Goethe University Frankfurt/Main, Frankfurt/Main, Germany, [6]Clinic of Psychiatry and Psychotherapy, Clinical Centre Fulda, Fulda, Germany, [7]Department of Psychiatry, University of Cologne, Cologne, Germany, [8]Department of Psychiatry and Psychotherapy, Eberhard Karls University, Tübingen, Germany

141 Spontaneous striatal activity reflects disease states and symptom dimensions in schizophrenia
Andrei Manoliu[1], Christian Sorg[2], Susanne Neufang[3], Nicholas Myers[3], Mark Mühlau[4], Josef Bäuml[5], Hans Förstl[5], Claus Zimmer[3], Afra Wohlschläger[3], Tom Eichele[6], Valentin Riedl[7]
[1]Department of Psychiatry and Neuroradiology, Technische Universität München, Munich, Germany, [2]Department of Psychiatry, Neuroradiology and Nuclear Medicine, Technische Universität München, Munich, Germany, [3]Department of Neuroradiology, Technische Universität München, Munich, Germany, [4]Department of Neurology, Technische Universität München, Munich, Germany, [5]Department of Psychiatry, Technische Universität München, Munich, Germany, [6]University of Bergen, [7]Dept. of Neurology, Technische Universitaet Munich - Germany, Klinikum Rechts Der Isar, Munich, Germany

142 Error processing, sequential trial effects and motivation in schizophrenia: An fMRI study
Alexander Nitsch[1], Johannes Hewig[2], Claudia Schachtzabel[1], Kathrin Koch[1], Ralf Schlösser[1], Ged Wagner[1], Daniel Wiswede[1], Wolfgang Miltner[1], Thomas Straube[1]
[1]University of Jena, Jena, Germany, [2]University of Würzburg, Würzburg, Germany

143 Recognition memory of highly arousing images in schizophrenia: an fMRI study of sex differences
Nadia Lakis[1,2], Josiane Bourque[1,2], Julie Champagne[1,2], Marc Lavoie[1,2], Adrianna Mendrek[1,2]
[1]Centre de Recherche Fernand-Seguin, Montreal, QC, Canada, [2]Université de Montréal, Département de Psychiatrie, Montreal, QC, Canada

144 Is neurocognitive function altered in treatment-resistant schizophrenia patients?,
Josiane Bourque[1,2], Julie Champagne[1,2], Nadia Lakis[1,2], Emmanuel Stip[1,2], Adrianna Mendrek[1,2]
[1]Centre de Recherche Fernand-Seguin, Montreal, Canada, [2]Université de Montréal, Montreal, Canada

145 Anosognosia or lack of insight in Schizophrenia: VBM and hemispheric asymmetry analyses
Philip Gerretsen[1], David Mamo[2], M. Mallar Chakravarty[3], Mahesh Menon[2], Bruce Pollock[2], Tarek Rajji[4], Ariel Graff[2]
[1]Centre for Addiction and Mental Health, [2]Centre for Addiction and Mental Health, Toronto, Canada, [3]Rotman Research Institute/Mouse Imaging Centre, Toronto, Ontario, [4]Cantre for Addiction and Mental Health, Toronto, Canada

146 DTI-tractography of the fornix and confidence in beliefs in first-episode psychosis
Lisa Buchy[1], David Luck[2], Yvonne Czechowska[2], Ashok Malla[2], Ridha Joober[2], Martin Lepage[1]
[1]McGill University, Montreal, Canada, [2]McGill, Montreal, Canada

>> Wednesday, June 29: 13:15 – 15:45 (even numbers)
>> Thursday, June 30: 10:30 – 13:00 (odd numbers)

147 Neurological soft signs and gray matter changes in first-episode schizophrenia
Li Kong[1], Silke Bachmann[2], Philipp Thomann[1], Marco Essig[3], Johannes Schröder[1]
[1]Department of General Psychiatry, University of Heidelberg, Heidelberg, Germany, [2]Psychotherapy and Psychosomatics, Halle-Wittenberg, Germany, [3]German Cancer Research Center, Heidelberg, Germany

148 Hippocampal CA3 and DG subfield changes in rCBV in schizophrenia on and off antipsychotic medication
Carolyn Sacco[1], Yan Fang[1], Perry Mihalakos[1], Jinsoo Uh[1], Hanzhang Lu[1], Anthony Wagner[2], Carol Tamminga[1]
[1]Department of Psychiatry, UT Southwestern, Dallas, TX, [2]Departments of Psychology & Neuroscience, Stanford University, Palo Alto, CA

149 The Kraepelinian dichotomy and fMRI markers of schizophrenia and bipolar affective disorder
Kerstin Zvonik[1], David Zilles[1], Sarah Trost[2], Ilona Henseler[3], Heike Tost[4], Marcella Rietschel[5], Peter Falkai[1], Oliver Gruber[1]
[1]Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Goettingen, Germany, [2]Center for Translational Research in Systems Neuroscience and Psychiatry, Goettingen, Germany, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [4]Central Institute of Mental Health (CIMH) Mannheim, Germany, Mannheim, Germany, [5]Central Institute of Mental Health, Mannheim, Germany

150 Withdrawn

151 Impaired fronto-striatal activity in the psychosis prodrome
Tiziano Colibazzi[1], Zhishun Wang[2], Fenglei Tian[2], Pengwei Wang[3], Kristin Klahr[2], Cheryl Corcoran[2], Bradley Peterson[3]
[1]Columbia University, [2]Columbia University, New York , NY, [3]Columbia University, New York , New York

152 Modification of activation pattern by long term high-frequency rTMS in schizophrenia-an fMRT study
Birgit Guse[1], Peter Dechent[2], Peter Falkai[3], Oliver Gruber[4], Thomas Wobrock[5]
[1]University of Goettingen, [2]MR-Research in Neurology and Psychiatry, University Medical Center Goettingen, Goettingen, Germany, [3]Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Göttingen, Germany, [4]Goettingen, Germany, [5]University of Goettingen, Psychiatry, Goettingen, Germany

153 Charactoristics of the brain function using a imagery finger movement in schizophrenia patients
Takefumi Ueno[1,2], Masayuki Inoue[3], Ryo Fujii[4], Toshi Abe[4], Kiichiro Morita[4]
[1]IUHW, Fukuoka, Japan, [2]Kyushu University Graduate School of Medical Sciences, Fukuoka, Japan, [3]Kawano najima hospital, Fukuoka, Japan, [4]Kurume University, Dep. of Medicine, Kurume, Japan

Disorders of the Nervous System

Sleep Disorders

154 Sleep deprivation alters decision value signals
Camilo Libedinsky[1], David Smith[2], Praneeth Namburi[1], Vanessa Chen[1], Chieh Schen Teng[1], Scott Huettel[2], Michael Chee[1]
[1]Duke-NUS Graduate Medical School, Singapore, Singapore, [2]Duke University, Durham, NC, United States

155 Instrumental conditioning of 12-15Hz brain oscillations enhances EEG frequencies and sleep quality
Manuel Schabus[1], Kerstin Hoedlmoser[1], Hermann Griessenberger[1], Dominik Heib[1], Annedore Pawlizki[2], Wolfgang Klimesch[1]
[1]University of Salzburg, Salzburg, Austria, [2]Ludwig-Maximilians-Universität München, Munich, Germany

156 The Role of the Insula in the Maintenance of Insomnia
Christopher Harvey[1], Colin Espie[2], Marie-Helene Grosbas[3]
[1]University of Glasgow Sleep Centre, [2]University of Glasgow Sleep Centre, Glasgow, United Kingdom, [3]University of Glasgow School of Psychology, Glasgow, United Kingdom

157 The supplementary motor area and dream-enacting behavior
Philippe PEIGNEUX[1], Vincent BOUDOUSQ[2], Regis LOPEZ[3], Audrey GABELLE[3], Valérie COCHEN DE COCK[3,4], Sophie BAYARD[3,4], Yves DAUVILLIERS[3,4]
[1]UR2NF - Neuropsychology and Functional Neuroimaging Research Unit, ULB, Bruxelles, Belgium, [2]Service de Médecine nucléaire, Hôpital Caremeau, CHU Nîmes, Nimes, France, [3]Service de Neurologie, Hôpital Gui-de-Chauliac, Montpellier, France, [4]Inserm U888, Montpellier, France

158 Brain Anatomical Abnormalities in Sleep Apnea: An Activation Likelihood Estimation Meta-analysis
Hsu-Huei Weng[1,2,3], Yu-Ching Lin[4], Ying-Huang Tsai[4], Cheng-Ta Yang[4], Chun-Yuh Yang[5], Chih-Feng Chen[1], Yuan-Hsiung Tsai[1]
[1]Department of Diagnostic Radiology, Chang Gung Memorial Hospital, Chiayi, Taiwan, Republic of China, [2]Department of Respiratory Care, Chang Gung Institute of Technology, Chiayi, Taiwan, Republic of China, [3]Department of Psychology, National Chung Cheng University, Chiayi, Taiwan, Republic of China, [4]Division of Pulmonary and Critical Care Medicine, Chang Gung Memorial Hospital, Chiayi, Taiwan, Republic of China, [5]Faculty of Public Health, College of Health Sciences, Kaohsiung Medical University, Kaohsiung, Taiwan, Republic of China

Disorders of the Nervous System

Stroke

159* **Cortical activation changes underlying stimulation-induced functional improvements in chronic stroke, (O-Th1)**
Charlotte Stagg[1], Velicia Bachtiar[1], Jacinta O'Shea[1], Claire Allman[1], Rosemary Bosnell[1], Kischka Udo[2], Paul Matthews[3], Heidi Johansen-Berg[1]
[1]University of Oxford, Oxford, United Kingdom, [2]Oxford Centre for Enablement, Oxford, United Kingdom, [3]Imperial College London, London, United Kingdom

160** **The role of the cortico-rubro-spinal tract in motor recovery after stroke – a DTI-study**
Theodor Ruber[1], Gottfried Schlaug[1], Robert Lindenberg[1]
[1]BIDMC / Harvard Medical School, Boston, United States

161 **Functional Brain Mapping by Means of EEG Resting State Connectivity Analysis**
Sviatlana Dubovik[1], Jean-Michel Pignat[1], Radek Ptak[1], Tatiana Aboulafia[1], Nicole Gillabert[1], Lara Allet[1], Armin Schnider[1], Adrian Guggisberg[1]
[1]University Hospital Geneva, Geneva, Switzerland

162 **Effective connectivity and electrophysiological excitability in stroke patients**
Anna-Sophia Sarfeld[1,2], Svenja Diekhoff[1], Anne Rehme[1], Simon Eickhoff[3,4], Gereon Fink[2,4], Christian Grefkes[1,2]
[1]Max-Planck-Institute for Neurological Research, Cologne, Germany, [2]Department of Neurology, University of Cologne, Germany, [3]Department of Psychiatry and Psychotherapy, University of Aachen, Germany, [4]Institute of Neuroscience and Medicine (INM-3), Cognitive Neurology Section, Juelich Research Centre, Juelich, Germany

163 **Brains predictors of motor recovery of stroke patients using fMRI and DCM analysis**
Marie-Hélène Boudrias[1], Amanda Wallace[1], Penelope Talelli[1], John Rothwell[1], Nick Ward[1]
[1]UCL Institute of Neurology, London, United Kingdom

164 **Does metabolite connectivity across spared motor areas is altered in stroke?**
Carmen M Cirstea[1], Randolph Nudo[1], William Brooks[1], Elena Popescu[1], Sorin Craciunas[1]
[1]University of Kansas Medical Center, Kansas City, KS

165 **Effective connectivity predicts behavioural response to rTMS in stroke patients**
Svenja Diekhoff[1], Anna-Sophia Sarfeld[1], Eva-Maria Hohl[1], Ricarda Strunk[1], Roland Sparing[2], Gereon Fink[2], Christian Grefkes[1]
[1]Max Planck Institute for neurological Research, Cologne, Germany, [2]Department of Neurology, University of Cologne, Cologne, Germany

166 **Indivualized assessment of alterations in resting-state functional connectivity following stroke**
Flore BARONNET[1,2], Sepideh Sadaghiani[1], Gael Varoquaux[1], Marie Gaudron[2], Charlotte Rosso[2], Yves Samson[2], Andreas Kleinschmidt[3]
[1]INSERM/CEA Cognitive neuroimaging unit, Gif-sur-Yvette, France, [2]Stroke unit Pitié-Salpêtrière Hospital, Paris, France, [3]INSERM, Gif/Yvette, France

167 **Comparison of Mapping Techniques for Prediction of Motor Function, Outcome Post Sub-Cortical Stroke**
Michael Sidel[1], Sasan Ghinani[2], Jeffery Minuk[3], Basia Radlinska[2], Caroline Paquette[4], Alexander Thiel[5]
[1]McGill University/Lady Davis Institute, [2]McGill University/Lady Davis Institute, Montreal, Quebec, [3]Jewish General Hospital/McGill University, Montreal, Quebec, [4]Jewish General Hospital & Lady Davis Institute for Medical Research, Montreal, Canada, [5]Jewish General Hospital - McGill University, Montreal, Canada

168 **Energy Flow Mapping & Heat Conduction Tensor Imaging to Plan Hypothermic Therapy in Neonatal Stroke**
Prasun Roy[1], Budhachandra Khundrakpam[1,2]
[1]National Brain Research Centre, Manesar, India, [2]Presently: Montreal Neurological Institute, Montreal, Canada

169 **Rs-connectivity changes predict movement recovery due to robot assisted BCI training**
Balint Varkuti[1], Cuntai Guan[2], Yaozhang Pan[2], Kok Soon Phua[2], Kai Keng Ang[2], Christopher Wee Keong Kuah[3], Karen Chua[3], Beng Ti Ang[4], Niels Birbaumer[1], Ranganatha Sitaram[1]
[1]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany, [2]Institute for Infocomm Research, Singapore, Singapore, [3]Department of Rehabilitation Medicine, Tan Tock Seng Hospital, TTSH rehabilitation centre, Singapore, Singapore, [4]National Neuroscience Institute, Singapore, Singapore

170 **Tissue-Differentiation in Stroke using Resting-state fMRI**
Yating Lv[1], Daniel Margulies[1,2], Xiangyu Long[1], Christiane Rohr[1,2], Benjamin Winter[3], Matthias Endres[3], Kersten Villringer[3], Jochen Fiebach[3], Arno Villringer[1,2,3]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Berlin School of Mind and Brain, Humboldt University, Berlin, Germany, [3]Center for Stroke Research and Dept. Neurology, Charité, Berlin, Germany

171 Activation likelihood estimation meta-analysis of movement-related neural activity after stroke
Anne Rehme[1], Simon Eickhoff[2], Gereon Fink[3], Christian Grefkes[4]
[1]Max-Planck-Institute for neurological Research, Cologne, Germany, [2]Department of Psychiatry and Psychotherapy, Aachen, Germany, [3]Department of Neurology, University of Cologne, Cologne, Germany, [4]Max Planck Institute for Neurological Research Cologne, Cologne, Germany

172 Longitudinal Changes of Default-mode Network and Relationship with Cognitive Recovery after Stroke
Yun-Hee Kim[1], Ji-Young Park[1], Won Hyuk Chang[1], Min Jae Kang[1], Alvaro Pascual-Leone[2]
[1]Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of, [2]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

173 Improvement in neurophysiological measures and motor function by navigated rTMS in stroke
Shahid Bashir[1], Najib Umer[1], Perez Jennifer[1], Marine Vernet*[1], Mark Knobel[1], Alonso Miguel[1], Dylan Edwards[2], Alvaro Pascual-Leone[1]
[1]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, [2]Non-Invasive Brain Stimulation, and the Human Motor Control Laboratory, New York , United States

174 Neuronal network reorganization during aphasia therapy-based stroke recovery
Priya Santhanam[1], Blythe Buchholz[2], Steven Small[3,4]
[1]The University of Chicago, [2]The University of Chicago, Chicago, IL, [3]The University of Chicago, Chicago, United States, [4]The University of California- Irvine, Irvine, CA

175 Morphological Changes in Motor Fibres of the Corpus Callosum in Subcortical Stroke Patients
Basia Radlinska[1], Yasmin Blunck[2], Ilana Leppert[3], Alexander Thiel[4]
[1]McGill University/Lady Davis Institute, Montreal, Quebec, [2]LMU Munich, Munich, Germany, [3]McConnell Brain Imaging Centre, Montreal, Canada, [4]Jewish General Hospital - McGill University, Montreal, Canada

176 Intensive therapy induces white matter changes in stroke patients with aphasia
Xin Zheng[1], Catherine Wan[1], Sarah Marchina[1], Andrea Norton[1], Gottfried Schlaug[1]
[1]Beth Israel Deaconess Medical Center / Harvard Medical School, Boston, MA

177 Lesion Loads of functional and structural canonical map predict recovery from aphasia
Jing Wang[1], Lin Zhu[1], Sarah Marchina[1], Andrea Norton[1], Catherine Wan[1], Jennifer Zuk[1], Gottfried Schlaug[1]
[1]Beth Israel Deaconess Medical Center / Harvard Medical School, Boston, MA

178 Brain volume change after stroke and acute Granulocyte-Colony-Stimulating-Factor intervention
Matthias Kraemer[1], Thorsten Schormann[2], Andreas Dabringhaus[3], Sandra Boy[4], Gerhard Schuierer[4], Sophie Sauerbruch[4], Ulrich Bogdahn[4]
[1]Neurological Therapy Center, Cologne, Germany, [2]Institute for Anatomy, Duesseldorf, Germany, [3]St. Mauritius Therapy Clinic, Meerbusch, Germany, [4]Department of Neurology, University Medical Center, Regensburg, Germany

179 What is the role of the left hemisphere in recovery of language in patients with aphasia? A multiple case study
Swathi Kiran[1,2], Peter Glynn[2], Chaleece Sandberg[2]
[1]University of Texas at Austin, Austin, United States, [2]Boston University, Boston, MA

180 Cortical plasticity and predictive markers for stroke recovery defined by a multi-modal framework
Kelly Westlake[1], Monica Bucci[2], Leighton Hinkley[3], Roland Henry[2], Srikantan Nagarajan[4]
[1]University of Maryland School of Medicine, Baltimore, United States, [2]Department of Radiology, University of California, San Francisco, San Francisco, United States, [3]Biomagnetic Imaging Lab, Department of Radiology, University of California, San Francisco, San Francisco, United States, [4]Biomagnetic Imaging Lab, Department of Radiology, University of California in San Francisco, San Francisco, CA

181 Pedaling-related Brain Activity in Chronic Stroke Survivors: An fMRI Study
Nuttaon Promjunyakul[1,2], Matthew Verber[3], Brian Schmit[1], Sheila Schindler-Ivens[2]
[1]Department of Biomedical Engineering, Marquette University, Milwaukee, WI, [2]Department of Physical Therapy, Marquette University, Milwaukee, WI, [3]Clinical and Translational Science Institute, Medical College of Wisconsin, Milwaukee, WI

182 Structural and Functional Association of Hand Recovery in Pediatric Patients Following Stroke
Trish Domi[1], David Mikulis[2], Mary Pat McAndrews[3], Gabrielle deVeber[4]
[1]Hospital for Sick Children, Toronto, Canada, [2]University Health Network - Toronto Western, Toronto, ON, [3]University Health Network - U of Toronto, Toronto, Canada, [4]Hospital for Sick Children, Toronto, Ontario

183 Withdrawn**

Disorders of the Nervous System

Other Disorders

184* **Involvement of spinal sensory pathway in amyotrophic lateral sclerosis detected with DTI and MT, (O-Th1)**
Mohamed-Mounir EL MENDILI[1], Julien Cohen-Adad[2,1], Sophie Blancho[3], Régine Morizot-Koutlidis[4], Stéphane Lehéricy[5,6], Serge Rossignol[7], Habib Benali[1], Pierre-François Pradat[8]
[1]UMR-678, INSERM-UPMC, Pitié-Salpêtrière Hospital, Paris, France, [2]Martinos Center for Biomedical Imaging, MGH, Harvard Medical School, Charlestown, MA, USA, [3]Institut pour la Recherche sur la Moelle Epinière et l'Encéphale, Paris, France, [4]Service Explorations Fonctionnelles Neurologie, Pitié-Salpêtrière Hospital, Paris, France, [5]CENIR, Paris, France, [6]CR Institut du Cerveau et de la Moelle épinière, Pitié-Salpêtrière Hospital, Paris, France, [7]GRSNC, Faculty of Medicine, Université de Montréal, Montréal, Canada, [8]Département des Maladies du Système Nerveux, AP-HP, Pitié-Salpêtrière Hospital, Paris, France

185** **Abnormalities in the Microstructure of the Attention Network in Adults with ADHD**
Yi-Huan Wu[1], Wen-Yih Tseng[2,3], Fang-Cheng Yeh[4], Wen-Yang Chiang[5], Shur-Fen Gau[6]
[1]School of Medicine National Taiwan University College of Medicine, Taipei, Taiwan, [2]Center for Optoelectronic Biomedicine, National Taiwan University College of Medicine, Taipei, Taiwan, [3]Department of Medical Imaging, National Taiwan University Hospital, Taipei, Taiwan, [4]Department of Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA, USA, [5]Department of Biomedical Engineering, Texas A&M University, College Station, TX, USA, [6]Department of Psychiatry, National Taiwan University Hospital and College of Medicine, Taipei, Taiwan

186** **Evaluating Diffusion Abnormalities in Sickle Cell Disease with Tract-Based Spatial Statistics**
Binjian Sun[1], Clark Brown[1], Laura Hayes[1], Thomas Burns[1], Richard Jones[1,2]
[1]Children's Healthcare of Atlanta, Atlanta, GA, [2]Emory University, Atlanta, GA

187** **Cognitive processing of food stimuli in chronically ill and recovered women with anorexia nervosa**
Paul Smeets[1,2], Nicole Sanders[3], Annemarie van Elburg[3], Hans Hoek[3], Unna Danner[3], Max Viergever[1], Roger Adan[1]
[1]University Medical Center Utrecht, Utrecht, Netherlands, [2]Division of Human Nutrition, Wageningen University, Wageningen, Netherlands, [3]Rintveld Centre for Eating Disorders, Zeist, Netherlands

188** **Diffusion Tensor Imaging of the Cerebellum and Eyeblink Conditioning in Fetal Alcohol Spectrum**
Bruce Spottiswoode[1,2], Ernesta Meintjes[1], Adam Anderson[3,4], Christopher Molteno[5], Mark Stanton[6], Neil Dodge[7], John Gore[4], Bradley Peterson[8], Joseph Jacobson[9,10,11], Sandra Jacobson[9,10,11]
[1]MRC/UCT Medical Imaging Research Unit, Department of Human Biology, University of Cape Town, Cape Town, South Africa, [2]Department of Radiological Sciences and Oncology, University of Stellenbosch, Cape Town, South Africa, [3]Vanderbilt University Institute of Imaging Science, Nashville, TN, [4]Department of Biomedical Engineering, Vanderbilt University, Nashville, TN, [5]Department of Psychiatry, University of Cape Town, Cape Town, South Africa, [6]Department of Psychology, University of Delaware, Newark, DE, [7]Department of Psychiatry and Behavioral Neurosciences, Wayne State University, Detroit, MI, [8]Division of Child Psychiatry, Columbia College of Physicians & Surgeons, New York , NY, [9]Department of Psychiatry and Behavioral Neurosciences, Wayne State University School of Medicine, Detroit, MI, [10]Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa, [11]Department of Human Biology, University of Cape Town, Cape Town, South Africa

189 **Functional Connectivity of Pain-mediated Affect Regulation in Borderline Personality Disorder**
Inga Niedtfeld[1], Peter Kirsch[1], Sabine Herpertz[2], Martin Bohus[1], Christian Schmahl[1]
[1]Central Institute of Mental Health, Mannheim, Germany, [2]Center of Psychosocial Medicine, Heidelberg, Germany

190 **White matter and gray matter changes in isolated optic neuritis patients during one year follow up**
Gelareh Ahmadi[1], Scott Kolbe[1], Anneke Van der Walt[2,3], Neil Shuey[4], Peter Mitchell[5], Helmut Butzkueven[1,3], Mark Paine[4], Mark Marriott[4], Trevor Kilpatrick[1,3], Gary Egan[1]
[1]Florey Neuroscience Institutes, Centre for Neuroscience, University of Melbourne, Melbourne, Australia, [2]Centre for Neuroscience, Neuro-ophthalmology Unit, Royal Victorian Eye and Ear Hospital, Melbourne, Australia, [3]Department of Neurology, Royal Melbourne Hospital, Melbourne, Australia, [4]Neuro-ophthalmology Unit, Royal Victorian Eye and Ear Hospital, Melbourne, Australia, [5]Department of Radiology, Royal Melbourne Hospital, Melbourne, Australia

191 **Compensatory effects of acute mental fatigue on brain mechanisms: An fMRI study**
Seishu Nakagawa[1], Motoaki Sugiura[1], Yuko Akitsuki[2], SM Hadi Hosseini[1], Yuka Kotozaki[2], Carlos Makoto Miyauchi[1], Yukihito Yomogida[1,3], Hikaru Takeuchi[2], Ryuta Kawashima[1,2]
[1]IDAC, Tohoku University, Sendai, Japan, [2]SAIRC, Tohoku University, Sendai, Japan, [3]JSPS, Tokyo, Japan

192 **Study of Susceptibility Contrast in Deep Brain Gray Matter Areas in Multiple Sclerosis with 7T MRI**
Bing Yao[1], Francesca Bagnato[2], Karin Shmueli[1], Jeff Duyn[1]
[1]Advanced MRI, LFMI, NINDS, National Institutes of Health, Bethesda, MD, [2]Neuroimmunology Branch, NINDS, National Institutes of Health, Bethesda, MD

193 Brain White Matter Atrophy Correlates with Nadir CD4+ Counts and N-acetylaspartate (NAA) in HIV/AIDS

Xue Hua[1], Suh Lee[1], Christina Boyle[1], Priya Rajagopalan[1], Arthur Toga[1], Jaroslaw Harezlak[2], Constantin Yiannoutsos[2], David Tate[3], Bradford Navia[4], Paul Thompson[1]
[1]Laboratory of Neuro Imaging, UCLA School of Medicine, Los Angeles, CA, United States, [2]Indiana University School of Medicine, Indianapolis, IN, United States, [3]Brigham and Women's Hospital, Boston, MA, United States, [4]Tufts University School of Medicine, Neurology and Community Health, Boston, MA, United States

194 Cortical Thickening in PTSD-free Women with BPD is Associated with Enhanced Emotion Regulation

Hannah Bruehl[1], Stefan Roepke[2], Sandra Preissler[3], Hauke Heekeren[1], Isabel Dziobek[2]
[1]Department of Education and Psychology, Freie Universität Berlin, Berlin, Germany, [2]Cluster Languages of Emotion, Freie Universität Berlin, Berlin, Germany, [3]Biological and Clinical Psychology, Universität Jena, Jena, Germany

195 Humans exposed to chronic work related stress display specific changes in limbic networks

Hristina Jovanovic[1], Hans Berglund[2], Aleksander Perski[3], Ivanka Savic[1]
[1]Dept of Clinical Neuroscience, Karolinska Institute, STOCKHOLM, Sweden, [2]Dpt of Medicine, Karolinska Institute, STOCKHOLM, Sweden, [3]Stress Institute, Stockholm University, STOCKHOLM, Sweden

196 Grey matter changes in Motor Conversion Disorder

Selma Aybek[1,2], Timothy Nicholson[2], Bogdan Draganski[1,3,4], Anthony David[2], Richard Kanaan[2]
[1]Laboratoire Recherche Neurosciences (LREN), Lausanne, Switzerland, [2]Institute of Psychiatry (IoP), King's College, London, United Kingdom, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [4]Mind Brain Institute, Charité and Humboldt University, Berlin, Germany

197 Structural differences in breast cancer patients compared to matched controls prior to chemotherapy

Carole Scherling[1], Joyce MacKenzie[2], Barbara Collins[2], Andra Smith[3]
[1]School of Psychology, University of Ottawa, Ottawa, Canada, [2]Ottawa Hospital, Ottawa, Ontario, [3]School of Psychology, University of Ottawa, Ottawa, Ontario

198 Effect of nutrients on intrinsic connectivity in lean and obese subjects

Lisa Kilpatrick[1], Lynn Shapiro Connolly[2], Kristen Coveleskie[3], Jean Stains[4], Brandall Suyenobu[4], Bahar Ebrat[5], Kirsten Tillisch[6], Emeran Mayer[7]
[1]UCLA Center for Neurobiology of Stress, Los Angeles, United States, [2]University of CA, Los Angeles, Los Angeles, CA, [3]UCLA, Los Angeles, CA, [4]UCLA, Los ANgeles, CA, [5]Uiversity of CA, Los Angeles, Los Angeles, CA, [6]UCLA, Los Angeles, United States, [7]Center for Neurobiology of Stress, UCLA, Los Angeles, CA

199 Relationships between Grey matter Volume, Body Mass Index, and Waist Circumference in Healthy Adults

Florian Kurth[1], Jennifer Levitt[1], Owen Phillips[2], Roger Woods[2], John Mazziotta[2], Arthur Toga[2], Katherine Narr[2]
[1]Department of Psychiatry and Biobehavioral Sciences, UCLA School of Medicine, Los Angeles, CA, USA, [2]Department of Neurology, UCLA School of Medicine, Los Angeles, CA, USA

200 Incidental findings on brain MRI in long-term breast cancer survivors treated with chemotherapy

Vincent Koppelmans[1,2], Sanne Schagen[3], Marielle Poels[4], Willem Boogerd[2], Caroline Seynaeve[5], Aad van der Lugt[4], Monique Breteler[4]
[1]Erasmus Medical Centre, Rotterdam, the Netherlands, [2]Netherlands Cancer Institute/Antoni van Leeuwenhoek Hospital, Amsterdam, Netherlands, [3]Dept of Psychosocial Research and Epidemiology, Netherlands Cancer Institute, Amsterdam, Netherlands, [4]Erasmus Medical Centre, Rotterdam, Netherlands, [5]Erasmus Medical Centre; Daniel den Hoed Clinic, Rotterdam, Netherlands

201 Sensorimotor cortical changes after botulinum-toxin treatment of spasticity in multiple sclerosis

Petr Hlustik[1], Roman Herzig[1], Pavel Hok[1], Petr Kanovsky[1], Jan Mares[1], Pavel Otruba[1], Vladimira Sladkova[1]
[1]Department of Neurology, Palacky University and University Hospital, Olomouc, Czech Republic

202 Diffusion tensor imaging reveals white matter differences in children with neurofibromatosis type 1

Qiuyun Fan[1,2], Nicole Davis[2,3], Sheryl Rimrodt[2,4], Adam Anderson[1,2], Laurie Cutting[2,3,4,5,6]
[1]Biomedical Engineering, Vanderbilt University, Nashville, TN, [2]Vanderbilt University Institute of Imaging Science, Nashville, TN, [3]Department of Radiology and Radiological Sciences, Vanderbilt University, Nashville, TN, [4]Department of Pediatrics, Vanderbilt University, Nashville, TN, [5]Department of Special Education, Peabody College, Vanderbilt University, Nashville, TN, [6]Department of Psychology, Vanderbilt University, Nashville, TN

203 MRS study of the Cerebellar Deep Nuclei in Children with Fetal Alcohol Spectrum Disorder

Lindie Du Plessis[1,2], Aaron Hess[1,2], Sandra Jacobson[3,2,4], Joseph Jacobson[3,2,4], Christopher Molteno[4], Ernesta Meintjes[1,2]
[1]MRC/UCT Medical Imaging Research Unit, University of Cape Town, Cape Town, South Africa, [2]Department of Human Biology, University of Cape Town, Cape Town, South Africa, [3]Department of Psychiatry and Behavioral Neurosciences, Wayne State University School of Medicine, Michigan, United States, [4]Department of Psychiatry, University of Cape Town, Cape Town, South Africa

204 Stress as a Means of Subdividing Gulf War Illness: Effects of Exercise on Working Memory
Megna Raksit[1], Yin Zheng[2], Murugan Ravindran[2], Andrew Breeden[1], Christian Timbol[2], Rania Esteitie[2], Oluwatoyin Adewuyi[2], John VanMeter[1], James Baraniuk[2]
[1]Center for Functional and Molecular Imaging, Georgetown University Medical Center, Washington, DC, United States, [2]Pain Fatigue Research Alliance, Georgetown University Medical Center, Washington, DC, United States

205 Altered picture naming network in left frontal lobe tumor patients- a functional neuroimaging study
anya chakraborty[1], sarika cherodath[2], ranjini garg[3], V.S Mehta[3], Nandini Singh[4]
[1]national brain research centre, [2]national brain research centre, manesar, India, [3]paras hospital, gurgaon, India, [4]National Brain Research Centre, Gurgaon, India

206 Impulsivity exaggerates the processing of distressful vocal tones in young offenders
An-Yi Hung[1], Yawei Cheng[2]
[1]Institute Of Neuroscience, Taipei, Taiwan- Republic Of China, [2]Institute of Neuroscience, National Yang-Ming University, Taipei, Taiwan, Republic of China

207 Neural correlates of lack of perseverance in adolescent obesity
Elena Delgado-Rico[1], Laura Moreno-Lopez[1], Juan Verdejo[1], Francisco Cruz[1], Miguel Pérez-García[1], Emilio González Jiménez[2], Jacqueline Schmidt[2], Cristina Campoy[3], Carles Soriano-Mas[4], Antonio Verdejo-García[5]
[1]Department of Personality, Evaluation and Psychological Treatment, Granada, Spain, [2]Department of Nursing, Granada, Spain, [3]Departament of Pediatrics, University of Granada, Granada, Spain, [4]Bellvitge University Hospital, Barcelona, Spain, [5]Department of Personality, Evaluation and Psychological Treatment, University of Granada, Granada, Spain

208 Cortical Thickness Deficits in Conduct Disordered Adolescents
Christopher Hyatt[1], Emily Haney-Caron[1], Michael Stevens[1]
[1]Olin Neuropsychiatry Research Center of the Institute of Living, Hartford, CT

209 Hippocampal changes in Episodic Migraine Patients: Morphometric and Fucntional Evidences
Nasim Maleki[1], Lino Becerra[1], Lauren Nutile[1], Gautam Pendse[1], Marcelo Bigal[2], Rami Burstein[3], David Borsook[1]
[1]P.A.I.N. Group, McLean Hospital, Harvard Medical School, Belmont, MA, [2]Global Center for Scientific Affairs, Merck & Co., Bronx, NJ, [3]Department of Anesthesia, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

210 Under-connectivity of Default Mode Network due to Extreme High-altitude Hypoxia in The Himalayas
Shripad Kondra[1], Krishan Kumar[2], Sunil Hota[3], Prasun Roy[1]
[1]National Brain Research Centre, Manesar, India, [2]National Brain Research Centre, Govt. General Hospital, Gurgaon, India, [3]Defence Institute For High Altitude Research, Leh, India

211 Language lateralization in patients with Tuberous Sclerosis Complex (TSC) using MEG
Anne Gallagher[1], Naoaki Tanaka[1], Nao Suzuki[1], Hesheng Liu[1], Elizabeth Thiele[2], Steven Stufflebeam[1]
[1]Harvard Medical School, Mass General Hospital, Martinos Center for Biomedical Imaging, Boston, MA, [2]Harvard Medical School, Mass General Hospital, Boston, MA

212 A pilot fMRI study examining reward response in Binge-Eating Disorder
Eunice Chen[1], Karla Fettich[1], George Monteleone[1], Michael McCloskey[2], Eric Stice[3], THOMAS ZEFFIRO[4], Jia-Hong Gao[1], John Cacioppo[1]
[1]The University of Chicago, Chicago, IL, [2]Temple University, Philadelphia, IL, [3]Oregon Research Institute, Portland, OR, [4]MASSACHUSETTS GENERAL HOSPITAL, CHARLESTOWN, United States

213 Functional connectivity disruption in the emotional face perception network in psychopaths
Oren Contreras Rodríguez[1], Jesus Pujol[1], Iolanda Batalla[2], Ben J Harrison[3], Eva Real[4], Vanesa Pera[2], Rosa Hernández-Ribas[4], Laura Bossa[2], Carles Soriano-Mas[4], Joan Deus[5], Marina López-Solà[1], Josep Pifarré[2], Laura Blanco[1], José Menchón[4], Narcis Cardoner[4]
[1]PRBB CRC- Hospital del Mar, Barcelona, Spain, [2]Hospital de Santa Maria de Lleida, Lleida, Spain, [3]The University of Melbourne, Melbourne, Australia, [4]Bellvitge University Hospital-IDIBELL, Barcelona, Spain, [5]Universitat Autònoma de Barcelona, Barcelona, Spain

214 An Ongoing Pilot fMRI Study of Neurobehavioral Processes in Maltreated Adolescents
Kate Nooner[1,2], Shaquanna Brown[1], F Xavier Castellanos[3,2], Michael Milham[3,2]
[1]Montclair State University, Montclair, NJ, [2]Nathan S. Kline Institute for Psychatric Research, Orangeburg, NY, [3]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY

215 Thalamic dysmorphology in individuals with Williams syndrome
Jian Chen[1,2], Marilee Martens[3], Sarah Wilson[4], David Reutens[5]
[1]Murdoch Childrens Research Institute, Melbourne, Australia, [2]Monash University, Melbourne, Australia, [3]Ohio State Universit, Columbus, United States, [4]Melbourne University, Melbourne, Australia, [5]University of Queensland, Brisbane, Australia

216 Using fMRI as a Quantitative Assessment of Symptomatic Changes in Fibromyalgia
Manish Khatiwada[1], John VanMeter[1], Brian Walitt[2]
[1]Center for Functional and Molecular Imaging, Georgetown University Medical Center, Washington, DC, [2]Washington Hospital Center, Georgetown University Hospital, Washington, DC

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217 Language network changes during rest and covert verb-generation in Amyotrophic Lateral Sclerosis
Laura Jelsone-Swain[1], Carol Persad[2], Pooja Modi[2], Dustin Hammers[2], Robert Welsh[3]
[1]University of Michigan, Ann Arbor, MI, [2]university of michigan, Ann Arbor, United States, [3]UNIVERSITY OF MICHIGAN DEPARTMENT OF RADIOLOGY, Ann Arbor, MI

218 A Review of Neuroimaging Findings in Suicidal Behaviour
Yang Ding[1], Gustavo Turecki[2], Philippe Courtet[3], Fabrice Jollant[1]
[1]Douglas Hospital, McGill University, Montreal, Quebec, [2]Douglas Hospital, McGill University, Montreal, QC, [3]Université Montpellier I, Montpellier, France

219 Neural correlates of Herpes Simplex encephalitis – A VBM study
Friederike Thiel[1], Stefan Frisch[2], Arno Villringer[2], Annette Horstmann[3], Matthias Schroeter[2]
[1]Day Clinic for Cognitive Neurology, Leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]MPI for Human Cognitive and Brain Sciences, Leipzig, Germany

220 Altered default mode and salience network in somatoform pain disorder
christian sorg[1], Alexander Kalckreuth[2], Valentin Riedl[3], Susanne Neufang[4], Hans Förstl[5], Harald Gündel[6], Michael Valet[2], Thomas Toelle[2], Afra Wohlschläger[7]
[1]Department of Psychiatry and Neuroradiology, Technische Universität München, Munich, Germany, [2]Department of Neurology, Technische Universität München, Munich, Germany, [3]Dept. of Neurology, Technische Universitaet Munich - Germany, Klinikum Rechts Der Isar, Munich, Germany, [4]Department of Neuroradiology, Technische Universität München, Munich, Germany, [5]Department of Psychiatry, Technische Universität München, Munich, Germany, [6]Department of Psychosomatic Medicine, University of Ulm, Ulm, Germany, [7]Department of Neuroradiology, Technische Universität München, München, Germany

221 Altered Default Network Activity in Obesity
Jason Tregellas[1], Korey Wylie[2], Donald Rojas[2], Jody Tanabe[2], Marc-Andre Cornier[2]
[1]University of Colorado Denver, Aurora, United States, [2]University of Colorado Denver, Aurora, CO

222 Functional Changes of Periaqueductal Gray in Episodic Migraine
Nasim Maleki[1], Lino Becerra[1,2], Lauren Nutile[1], Gautam Pendse[1], Marcelo Bigal[3,4], Rami Burstein[5], David Borsook[1,2]
[1]P.A.I.N. Group, McLean Hospital, Harvard Medical School, Belmont, MA, [2]Departments of Psychiatry and Radiology, Massachusetts General Hospital, Harvard Medical School, Charlestown, MA, [3]Global Center for Scientific Affairs, Merck & Co., Bronx, NJ, [4]Department of Neurology, Albert Einstein College of Medicine, Bronx, NJ, [5]Department of Anesthesia, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

223 Neural correlates of reward sensitivity in overweight adolescent
Laura Moreno-Lopez[1], Elena Delgado-Rico[1], Juan Verdejo[1], Francisco Cruz[1], Miguel Pérez-García[1], Emilio González Jiménez[2], Jacqueline Schmidt[2], Cristina Campoy[3], Carles Soriano-Mas[4], Antonio Verdejo-García[1]
[1]Department of Personality, Evaluation and Psychological Treatment, University of Granada, Granada, Spain, [2]Department of Nursing, University of Granada, Granada, Spain, [3]Departament of Pediatrics, School of Medicine, University of Granada, Granada, Spain, [4]Bellvitge University Hospital, Barcelona, Spain

224 Magnetization Transfer Imagining of CNS involvement in systemic lupus erythematosus
Robert Zivadinov[1], David Shucard[1], Sarah Hussein[1], Jackie Durfee[1], Jenniver Cox[1], Ralph Benedict[1], Janet Shucard[1]
[1]University at Buffalo School of Medicine and Biomedical Sciences, Buffalo, NY

225 An fMRI Study about "Disembodiment Phenomenon" of Adolescents with Internet Addiction
Jungwoo Son[1], Weonhee Choi[1], Seongwoo Jo[2], Yeongrang Kim[3], Seungbok Lee[2], Sangick Lee[1], Jonghyun Oh[1]
[1]Chungbuk National University Hospital, Cheongju, Korea, Republic of, [2]Chungbuk National University, Cheongju, Korea, Republic of, [3]Cheongju Medical Health Hospital, Cheongju, Korea, Republic of

226 Exaggerated Neural Responses to Reward Anticipation in Borderline Personality Disorder
Tiffany Love[1], Chelsea Cummiford[2], Kenneth Silk[2], Jon-Kar Zubieta[2]
[1]University of Michigan, [2]University of Michigan, Ann Arbor, MI

Emotion and Motivation

Emotional Learning

227 The role of dynorphins in fear memory
Henrik Walter[1], Andreas Zimmer[2], Andreas Bilkei-Gorzo[2], Henning Boecker[3], Lukas Scheef[4], Erk Susanne[5]
[1]Department of Psychiatry and Psychotherapy Charité University Medicine, Berlin, Germany, [2]Institute of Molecular Psychiatry, University of Bonn, Bonn, Germany, [3]FE Klinische Funktionelle Bildgebung, Experimentelle Radiologie, Uniklinik Bonn, Bonn, Germany, [4]Dep. of Radiology, Bonn, Germany, [5]Department of Psychiatry, Charite. Berlin, Berlin, Germany

228 Self-regulation of Amygdala Activation with Real-Time fMRI Neurofeedback
Vadim Zotev[1], Frank Kruger[2], Raquel Phillips[1], Ruben Alvarez[1], W. Kyle Simmons[1], Patrick Bellgowan[1], Wayne Drevets[1], Jerzy Bodurka[1]
[1]Laureate Institute for Brain Research, Tulsa, OK, United States, [2]George Mason University, Fairfax, VA, United States

229 Associative learning coincides with an increase in trial-by-trial similarity of BOLD-MRI patterns
Renée Visser[1], H. Steven Scholte[1], Merel Kindt[1]
[1]University of Amsterdam, Amsterdam, Netherlands

230 Midbrain Dopamine-Modulated BOLD Response to Reinforced Emotional Cues is Valence-Specific
Mbemba Jabbi[1], Philip Kohn[2], Raghav Mattay[2], Brett Cropp[2], Tiffany Nash[2], James Zhang[2], Jonathan Kippenhan[3], Daniel Eisenberg[4], Joseph Masdeu[4], Karen Berman[4]
[1]National Institutes of Health, NIMH, Bethesda, United States, [2]National Institutes of Health, NIMH, Bethesda, MD, [3]National Institutes of Health, Bethesda, United States, [4]National Institutes of Health, Bethesda, MD

231 Brain Mechanisms Underlying Consolidation and Remembering of Emotional Information in Normal Aging
Grégoria Kalpouzos[1], Lars Bäckman[1], Håkan Fischer[1]
[1]Aging Research Center - Karolinska Institutet/Stockholm University, Stockholm, Sweden

232 The impact of individual differences on anti-drug advertisements: an fMRI study of adolescents
Ian Ramsay[1], Ron Faber[1], Monica Luciana[1], Angus MacDonald[1], Kathleen Vohs[1], Marco Yzer[1]
[1]University of Minnesota, Twin Cities, MN

233 Combination of SVM and ROI Approaches for Real-Time fMRI Neurofeedback
Vadim Zotev[1], Raquel Phillips[1], Ruben Alvarez[1], W. Kyle Simmons[1], Patrick Bellgowan[1], Wayne Drevets[1], Jerzy Bodurka[1]
[1]Laureate Institute for Brain Research, Tulsa, OK, United States

234 Biofeedback of real-time fMRI data from the orbitofrontal cortex to reduce contamination anxiety
Teodora Stoica[1], John Saksa[1], Dustin Scheinost[1], Maolin Qiu[1], Jitendra Bhawnani[1], Xenophon Papademetris[1], R. Todd Constable[1], Michelle Hampson[1]
[1]Yale University, School of Medicine, New Haven, US

235 Influence of body weight on selfregulation ability of the insular cortex
Sabine Frank[1,2,3], Sangkyun Lee[3], Ralf Veit[1,3], Hubert Preissl[1,4], Bernd Schultes[5], Niels Birbaumer[3,6]
[1]MEG Center, University of Tuebingen, Tuebingen, Germany, [2]Graduate School of Neural & Behavioural Sciences, International Max Planck Research School, Tuebingen, Germany, [3]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany, [4]Department of Obstetrics and Gynecology, University of Arkansas for Medical Sciences, Little Rock, AR, [5]Interdicsiplinary Obesity Center, Cantonal Hospital St. Gallen, Rorschach, Switzerland, [6]Ospedale San Camillo, Istituto di Ricovero e Cura a Carattere Scientifico, Venezia-Lido, Italy

Emotion and Motivation

Emotional Perception

236* Effects of (nor)adrenergic and HPA axis blockade on stress-related large-scale network connectivity, (O-W2)
Erno Hermans[1,2,3], Vincent Schoots[1], Guillén Fernández[1,2]
[1]Radboud University Nijmegen, Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands, [2]Radboud University Nijmegen Medical Centre, Department for Cognitive Neuroscience, Nijmegen, Netherlands, [3]New York University, Department of Psychology, New York, NY

237* Overnight therapy? Sleep de-potentiates emotional brain reactivity, (O-W2)
Els van der Helm[1], Justin Yao[1], Vikram Rao[1], Jared Saletin[1], Shubir Dutt[1], Matthew Walker[1]
[1]University of California Berkeley, Berkeley, CA

238* Emotional Contagion Facilitates Social Interaction by Synchronizing Brains Across Individuals, (O-W2)
Lauri Nummenmaa[1,2], Enrico Glerean[1], Iiro Jääskeläinen[1], Mikko Viinikainen[1], Riitta Hari[1], Mikko Sams[1]
[1]Aalto University School of Science and Technology, Espoo, Finland, [2]Turku PET Centre, Turku, Finland

239 DCMs of cortical and subcortical pathways for salient stimuli**
Marta Garrido[1], Gareth Barnes[1], Maneesh Sahani[2], Raymond Dolan[1]
[1]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom, [2]Gatsby Computational Neuroscience Unit, UCL, London, United Kingdom

240 Common representation of pain and negative emotion in the midbrain periaqueductal gray**
Jason Buhle[1], Hedy Kober[2], Kevin Ochsner[1], Peter Mende-Siedlecki[3], Jochen Weber[1], Brent Hughes[4], Ethan Kross[5], Lauren Atlas[6], Kateri McRae[7], Tor Wager[8]
[1]Columbia University, New York, NY, [2]Yale University School of Medicine, New Haven, CT, [3]Princeton University, Princeton, NJ, [4]University of Texas at Austin, Austin, TX, [5]University of Michigan, Ann Arbor, MI, [6]Columbia University, New York, United States, [7]University of Denver, Denver, CO, [8]University of Colorado at Boulder, Boulder, CO

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241 Rapid processing of subliminally presented fearful, disgusted and happy faces
Marie Smith[1]
[1]Birkbeck College, University of London

242 An fMRI study of the top-down control of peripheral feedback during a working memory task
Robert Clarke[1], Tom Johnstone[2]
[1]University of Reading, Reading, United Kingdom, [2]Psychology Department, University of Reading, Reading, United Kingdom

243 Integration of nonverbal emotional signals from voice and face - an fMRI adaptation study
Benjamin Kreifelts[1], Dirk Wildgruber[1], Carolin Brück[1], Sarah Wiethoff[1], Wolfgang Grodd[2], Thomas Ethofer[1]
[1]Department of Psychiatry and Psychotherapy, Eberhard-Karls-University, Tuebingen, Germany, [2]Section on Exp MR, Dep. Neuroradiology, Tuebingen, Germany

244 Triangulating the emotional appraisal and regulation network by functional connectivity analyses
Tanja Kellermann[1], Karl Zilles[2], Svenja Caspers[2], Christian Roski[2], Bruce Turetsky[3], Peter Fox[4], Simon Eickhoff[1]
[1]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [2]Institute of Neuroscience and Medicine, INM-2, Research Centre Juelich, Juelich, Germany, [3]Neuropsychiatry Division, Department of Psychiatry, University of Pennsylvania School of Medicine, Philadelphia, United States, [4]University Of Texas Health Science Center At San Antonio, San Antonio, United States

245 Anatomy, functional properies and connectivity of the emotional voice area: An fMRI/DTI study
Thomas Ethofer[1], Johannes Bretscher[1], Markus Gschwind[2], Benjamin Kreifelts[1], Dirk Wildgruber[1], Patrik Vuilleumier[2]
[1]Department of Psychiatry, University of Tuebingen, Tuebingen, Germany, [2]Department of Neurology, University of Geneva, Geneva, Switzerland

246 Thoracic spinal cord activity in response to threatening images: A functional MRI study
Stephen Smith[1], Jennifer Kornelsen[2], Theresa McIver[3], Uta Sboto-Frankenstein[4], Boguslaw Tomanek[4]
[1]University of Winnipeg, Winnipeg, Canada, [2]National Research Council Institute for Biodiagnostics, Winnipeg, Manitoba, [3]University of Winnipeg, Winnipeg, Manitoba, [4]National Research Council Canada, Institute for Biodiagnostics, Winnipeg, Manitoba

247 Endogenous cortisol fluctuations are associated with amygdala-mPFC functional connectivity at rest
Ilya Veer[1]
[1]Leiden Institute for Brain and Cognition, Leiden, Netherlands

248 Emotion and sleep interact to enhance the perceptual discrimination of ambiguous faces
Virginie Sterpenich[1], Camille Piguet[2], Martin Desseilles[3], Markus Gschwind[4], Patrik Vuilleumier[5], Sophie Schwartz[2]
[1]University of Geneva, [2]University of Geneva, Geneva, Switzerland, [3]University of Liège and Massachusetts General Hospital, [4]Department of Neurology, University of Geneva, Geneva, Germany, [5]Unige, Switzerland

249 Portraying sadness at its unfolding: Multi-level dynamics of emotion-related networks
Gal Raz[1], Yonatan Winetraub[1], Sivan Kinreich[2], Adi Maron[1], Ilana Podlipsky[3], Gadi Gilam[4], Talma Hendler[5]
[1]Tel Aviv University, Tel Aviv, Israel, [2]Tel Aviv University, Israel, Tel Aviv, Israel, [3]Functional Brain Center, Wohl Institute for Advanced Imaging, Tel-Aviv Sourasky Medical Center, Tel Aviv, Israel, [4]Tel-Aviv University, Tel Aviv, Israel, [5]Functional Brain Center, Wohl Institute for Advanced Imaging, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

250 Phasic and sustained activation of the anterior insula during the anticipation of aversion
Daniel Grupe[1], Daniel McFarlin[2], Desmond Oathes[3,2], Jack Nitschke[2]
[1]University of Wisconsin-Madison, Madison, United States, [2]University of Wisconsin-Madison, Madison, WI, [3]Stanford University, Stanford, CA

251 Age-related Differences in the Neural Representation of Emotional Arousal and Valence
Elizabeth Kehoe[1], John Toomey[2], Arun Bokde[3], Joshua Balsters[4]
[1]Trinity College Dublin Ireland, [2]Dublin Institute of Technology, Dublin, Ireland, [3]Trinity College Dublin, Dublin, Ireland, [4]Dublin, Ireland

252 The effect of negative life events on social reward depends on an oxytocin receptor polymorphism
Eva Loth[1], Benhamin Thyreau[2], Anbarasu Lourdusamy[1], David Stacey[1], Anna Cattrell[1], Gareth Barker[3], Christian Büchel[4], Patricia Conrod[5], Herta Flor[6], Juergen Gallinat[7], Hugh Garavan[8], Andreas Heinz[9], Mark Lathrop[10], Karl Mann[6], Jean-Luc Martinot[11], Tomas Paus[12], Luise Poustka[6], Trevor Robbins[13], Marcella Rietschel[6], Michael Smolka[14], Jean Baptiste Poline[15], Gunter Schumann[5]
[1]Institute of Psychiatry, King's College London, London, United Kingdom, [2]CEA, Gif sur Yvette, France, [3]Institute of Psychiatry, King's College, London, United Kingdom, [4]NeuroimageNord, Institute for Systems Neuroscience, University-Medical Center Hamburg-Eppendorf, Ger, Hamburg, Germany, [5]King's College London, Institute of Psychiatry, London, United Kingdom, [6]Central Institute of Mental Health, Mannheim, Germany, [7]Charite Universitaetsmedizin Berlin, Berlin, Germany, [8]Trinity College Institute of Neuroscience, Dublin, Ireland, [9]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany, [10]Centre National de Génotypage, Evry, France, [11]Institut National de la Santé et de la Recherche Médicale, Paris, France, [12]Rotman Research Institute, University of Toronto, Toronto, Canada, [13]University of Cambridge, Cambridge, United Kingdom, [14]Technische Universität Dresden, Dresden, Germany, [15]CEA-I2BM-Neurospin

253 Differences and similarities in maternal and paternal networks: an inter-subject correlation study
Shir Atzil[1], Yonatan Winetraub[2], Talma Hendler[3], Ruth Feldman[1]
[1]Bar-Ilan University, Ramat Gan, Israel, [2]Tel Aviv University, Tel Aviv, Israel, [3]Functional Brain Center, Wohl Institute for Advanced Imaging, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

254 Withdrawn

255 Complexity in emotional picture and word processing
Lorna Schlochtermeier[1], Lars Kuchinke[2], Arthur Jacobs[3]
[1]Free University Berlin, Berlin, Germany, [2]Ruhr-University Bochum, Bochum, Germany, [3]Dahlem Institute of Neuroimaging of Emotion, Berlin, Germany

256 Neuroticism is associated with altered amygdala functional connectivity at rest
Moji Aghajani[1], Ilya Veer[1], Marie-José Van Tol[2], Andre Aleman[2], Dick Veltman[3], Nic van der Wee[4], Serge Rombouts[1]
[1]Leiden Institute for Brain and Cognition, Leiden, Netherlands, [2]BCN NeuroImaging Center, Groningen, Netherlands, [3]VU University Medical Center, Department of Psychiatry, Amsterdam, Netherlands, [4]Leiden University Medical Center, Leiden, Netherlands

257 Differential neural responses to threatening and merely negative visual scenes
Kestas Kveraga[1], Jasmine Boshyan[2], Reginald Adams[3], Moshe Bar[1], Nouchine Hadjikhani[4], Lisa Feldman Barrett[5]
[1]MGH/Harvard Medical School, Charlestown, MA, [2]MGH, Charlestown, MA, [3]Pennsylvania State University, University Park, PA, [4]MGH/Harvard Medical School/EPFL, Charlestown, MA, [5]Northeastern University/MGH, Boston, MA

258 Neural Mechanisms for Effects of Stimulus Familiarization on Liking
Leslie Zebrowitz[1], Yi Zhang[1]
[1]Brandeis University, Waltham, MA

259 Emotion Suppression and Cognitive Flexibility: an fMRI study
Hui Ai[1], Yuxia Huang[1]
[1]State Key Laboratory of Neuroscience and Learning, Beijing, China

260 Personality Influences on the Cerebral Processing of Emotional Prosody
Carolin Brück[1,2], Benjamin Kreifelts[1], Evangelia Kaza[3], Martin Lotze[3], Dirk Wildgruber[1,2]
[1]University of Tübingen - Dept. of Psychiatry, Tübingen, Germany, [2]Werner Reichardt Centre for Integrative Neuroscience, Tübingen, Germany, [3]Functional Imaging Unit University of Greifswald, Greifswald, Germany

261 Neural correlates of subjective experience of valence during naturalistic stimulation
M Viinikainen[1,2], E Glerean[1,2], I Jääskeläinen[1,2], M Sams[1,2], L Nummenmaa[1,3,4,2]
[1]Department of Biomedical Engineering and Computational Science, Aalto University School of Science, Espoo, Finland, [2]Advanced Magnetic Imaging Centre, Aalto University School of Science, Espoo, Finland, [3]Brain Research Unit, Low Temperature Laboratory, Aalto University School of Science, Espoo, Finland, [4]Turku PET Centre, Turku, Finland

262 Musically-induced mood: Effects on social perception and neural correlates
Niclas Kilian-Hütten[1], Fabrizio Esposito[2], Elia Formisano[3]
[1]Maastricht University, [2]University of Naples, Castellammare di Sta, Italy, [3]Maastricht University, Maastricht, Netherlands

263 Chronic psychosocial stress and acute stress-induced corticolimbic activation
Jessica Richards[1], Thomas Ross[2], Stephanie Gorka[3], Elliot Stein[2], Stacey Daughters[4]
[1]University of Maryland, College Park, College Park, United States, [2]Neuroimaging Research Branch, National Institute on Drug Abuse, Baltimore, MD, [3]University of Illinois at Chicago, Chicago, IL, [4]University of Maryland, College Park, MD

264 Neural Correlates of Cognitive Performance in a Visual *n*-back Task after Auditory Distress
Nitesh Rana[1], Andrei Medvedev[2], William Adler[1], Jagmeet Kanwal[3]
[1]Georgetown University, Washington, DC, United States, [2]Dept. of Neurology, Georgetown University, Washington, DC, United States, [3]Depts. of Physiology and Biophysics, and Neurology, Georgetown University, Washington, DC, United States

265 Behavioral Activation and Inhibition Tendencies predict Differential BOLD Response to Gain and Loss
Hannah Raila[1], Mbemba Jabbi[1], Philip Kohn[1], Tiffany Nash[1], Brett Cropp[1], Raghav Mattay[1], James Zhang[1], Jonathan Kippenhan[1], Karen Berman[1]
[1]National Institutes of Mental Health, Bethesda, MD

266 The Modulation of the neural processing of audio-visual Kissing Scenes through happy and sad music
Corinna Pehrs[1], Jan Hendrik Bakels[2], Helmut Leder[3], Arthur Jacobs[1], Hermann Kappelhoff[4], Stefan Koelsch[5], Lars Kuchinke[6]
[1]Dahlem Institute of Neuroimaging of Emotion, Berlin, Germany, [2]Freie Universität Berlin, Berlin, Germany, [3]Universität Wien, Wien, Austria, [4]Freie Universität Berlin, Berlin, Berlin, [5]Dahlem Institute of Neuroimaging of Emotion, Berlin, Berlin, [6]Ruhr-Universität Bochum, Bochum, Germany

267 Neural correlates of three emotion regulation strategies
Ben Paul[1], Walter Schneider[1], Greg Siegle[2]
[1]University of Pittsburgh, Pittsburgh, PA, [2]University of Pittsburgh, School of Medicine, Pittsburgh, PA

268 Emotion processing in young girls with Turner syndrome
David Hong[1], Allan Reiss[2]
[1]Stanford University, Stanford, USA, [2]Stanford University, Stanford, CA

269 Glucagon-modulated mood induction
Timur Toygar[1], Nils Kohn[1,2,3], Ute Habel[1,2]
[1]RWTH Aachen University Hospital, Department of Psychiatry, Psychotherapy and Psychosomatics, Aachen, Germany, [2]JARA-Translational Brain Medicine, Aachen/ Juelich, Germany, [3]Virtual Project House Gender & Technology, RWTH Aachen University, Aachen, Germany

270 WHAT TURNS AMY ON? A REVIEW ON EMOTION PROCESSING IN THE AMYGDALA
Carmen Morawetz[1,2], Birgit Derntl[3]
[1]Department of Education and Psychology, Freie Universitaet Berlin, Berlin, Germany, [2]Cluster of Excellence "Languages of Emotion", Freie Universitaet Berlin, Berlin, Germany, [3]Institute for Clinical, Biological and Differential Psychology, University of Vienna, Vienna, Austria

271 Categorical vs. Dimensional Processing of Emotion Perception in Human Brain
Yoshi-Taka Matsuda[1], Tomomi Fujimura[1], Kentaro Katahira[1], Takeshi Asamizuya[2], Kenichi Ueno[2], Kang Cheng[2], Kazuo Okanoya[1]
[1]JST, ERATO, Wako, Japan, [2]RIKEN Brain Science Institute, Wako, Japan

272 Intelligent emotion processing in adolescence
William Lloyd[1], Justin Williams[2], Janek Lobmaier[3], Gordon Waiter[2]
[1]Uinversity of Aberdeen, Aberdeen, UK, [2]University of Aberdeen, Aberdeen, United Kingdom, [3]University of Berne, Berne, Switzerland

273 Relationship Between Childhood Abuse and Cortico-limbic Activation During a Stressful Task
Stephanie Gorka[1], Thomas Ross[2], Jessica Richards[3], Elliot Stein[2], Stacey Daughters[3]
[1]University Of Maryland, College Park, MD, [2]Neuroimaging Research Branch, National Institute on Drug Abuse, Baltimore, MD, [3]University of Maryland, College Park, MD

274 Estradiol modulation of brain activity associated with emotional processing: a comparison of older postmenopausal and younger cycling women
Paul Newhouse[1], Amanda Kutz[1], Ashley Pfaff[1], Magdalena Naylor[1], Christina Broadwell[1], Julie Dumas[1]
[1]University of Vermont, Burlington, VT

275 The 'Salience-Paradigm': effects in the salience network correlate with perceived stimulus salience
Sebastian Wendt[1], Coraline Metzger[1], Johann Steiner[2], Joern Kaufmann[3], Bernhard Bogerts[2], Martin Walter[1]
[1]Clinical Affective Neuroimaging Laboratory, Department of Psychiatry,-von-Guericke University, Magdeburg, Germany, [2]Department of Psychiatry, Otto-von-Guericke University, Magdeburg, Germany, [3]Department of Neurology, Otto-von-Guericke University, Magdeburg, Germany

276 Emotion regulation is modulated by specific stimulus material
Carmen Morawetz[1,2], Juergen Baudewig[1,2], Hauke Heekeren[1,2]
[1]Department of Education and Psychology, Freie Universitaet Berlin, Berlin, Germany, [2]Cluster of Excellence „Languages of Emotion", Freie Universitaet Berlin, Berlin, Germany

277 Effect of Caffeine and Placebo on Cerebral Response to Vocal Emotional Sounds and Working Memory
Michihiko Koeda[1], Yukari Nakano[2], Amane Tateno[1], Yumiko Ikeda[3], Woochan Kim[1], Hidehiko Takahashi[4], Hidenori Suzuki[3], Masato Matsuura[5], Yoshiro Okubo[1]
[1]Department of Neuropsychiatry, Nippon Medical School, Tokyo, Japan, [2]Department of Bioinformatics, Tokyo Medical and Dental University, Tokyo, Japan, [3]Department of Pharmacology, Nippon Medical School, Tokyo, Japan, [4]Department of Neuropsychiatry, Kyoto University, Kyoto, Japan, [5]Department of Biofunctional Informatics, Tokyo Medical and Dental University, Tokyo, Japan

278 Brain correlates of functional and dysfunctional beliefs: an fMRI study of cognitive reappraisal
Ioana Cristea[1,2], Claudio Gentili[3], Emiliano Ricciardi[4], Giuseppina Rota[4], Daniela Bonino[5], Daniel David[1], Pietro Pietrini[4], Mario Guazzelli[3]
[1]Babes-Bolyai University, Cluj-Napoca, Romania, [2]Clinical Psychology Chair, Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies, University of Pisa, Pisa, Italy, [3]Clinical Psychology Chair, Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies, Pisa, Italy, [4]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [5]Laboratory of Clinical Biochemistry and Clinical Molecular Biology, Universiy of Pisa, Pisa, Italy

279 Electrophysiological correlates of human sexual features processing
Lore Legrand[1,2], Marzia Del Zotto[3], Alan Pegna[1]
[1]Geneva University Hospital, Geneva, Switzerland, [2]University of Geneva, Geneva, Switzerland, [3]Geneva University Hospital And Neuroscience Center, University Of Geneva, Geneva 4, Switzerland

280 Brain responses to emotional music
Aubé William[1,2], Arafat Angulo-Perkins[3], Isabelle Peretz[1,2], Fernando Barrios[3], Luis Concha[3], Jorge Armony[1,4]
[1]International Laboratory for Brain, Music and Sound Research (BRAMS), Montréal, Canada, [2]Université de Montréal, Montréal, Canada, [3]Universidad Nacional Autonoma de Mexico, Queretaro, Mexico, [4]Douglas Institute and Department of Psychiatry, McGill University, Montréal, Canada

281 Superior Performance Under Extreme Challenge: Is cognitive reappraisal key to the "it" factor?
Amy J Haufler[1], Manish Khatiwada[2], Michelle Costanzo[3], Bradley Hatfield[1], John VanMeter[2]
[1]Department of Kinesiology, and Neuroscience and Cognitive Science Program, University of Maryland, College Park, MD, [2]Center for Functional and Molecular Imaging, Georgetown University Medical Center, Washington, DC, [3]Neuroscience and Cognitive Science Program, University of Maryland, College Park, MD

282 Heterogeneity of emotional reactivity in the amygdala in health and persistent visceral pain
Jennifer Labus[1], Brandall Suyenobu[1], Kristen Coveleskie[1], Lisa Kilpatrick[1], Kirsten Tillisch[2], Josh Bueller[1], Jean Stains[1], Bruce Naliboff[1,3], Emeran Mayer[1]
[1]Center for Neurobiology of Stress, UCLA, Los Angeles, CA, [2]Center for Neurobiology of Stress, UCLA, Los Angeles, CA, [3]VA Greater Los Angeles Health Care System, Los Angeles, CA

283 Top-down and Bottom-up Processes in Emotion Recognition,
Ming Peng[1], Lin Yuan[1], Renlai Zhou[1,2]
[1]School of Psychology, Beijing Normal University, Beijing, China, [2]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

284 An IRMf Study on Emotional Processing in Video Game Players
Aurélie CAMPAGNE[1], Benoit FRADCOURT[1], Nicolas MATHIEU[1], Emilie Cousin[2]
[1]Psychology and Neurocognition Laboratory, CNRS UMR5105, UPMF, Grenoble, France, [2]Laboratoire de Psychologie et Neurocognition, UMR CNRS 5105, UPMF, Grenoble, France

285 The role of the human insular cortex in pain and emotional processing
Isabella Mutschler[1], Johanna Wankerl[1], Erich Seifritz[2], Tonio Ball[3]
[1]University of Basel, department of psychology, Basel , Switzerland, [2]Clinic for Affective Disorders and General Psychiatry, Psychiatric Hospital Zurich, Zurich, Switzerland, [3]Bernstein Center for Computational Neuroscience, University of Freiburg, Freiburg, Germany

286 Emotions Transferred by Cochlear Implants: An ERP study Exploring the Possibilities
Deepashri Agrawal[1], Lydia Timm[2], R Dengler[2], Matthias Wittfoth[3]
[1]Department of Neurology, Hannover Medical School, Hannover,Germany, [2]Department of Neurology, Hannover Medical School, Hannover, Germany, [3]Department of Neurology, Hannover Medical School;NICA (NeuroImaging and Clinical Applications), Hannover, Germany

287 Differential humor training effects in male and female patients with MDD
Nils Kohn[1], Irina Falkenberg[2], Valentin Markov[1], Thilo Kellermann[1], Ute Habel[1]
[1]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [2]Department of Psychiatry & Psychotherapy, University of Marburg, Marburg, Germany

288 Specific associations of fMRI responses to different laughter types with laughter acoustics
Benjamin Kreifelts[1], Diana Szameitat[1], Carolin Brück[1], Kai Alter[2], Wolfgang Grodd[3], Thomas Ethofer[1], Dirk Wildgruber[1]
[1]Department of Psychiatry and Psychotherapy, Eberhard-Karls-University of Tübingen, Tuebingen, Germany, [2]Institute of Neuroscience, University of Newcastle, Newcastle upon Tyne, United Kingdom, [3]Section on Exp MR, Dep. Neuroradiology, Tuebingen, Germany

289 Neural Regions Responsive to Conflict between Emotional Experience and Emotion Categorization
Sandhya Narayanan[1], Ajay Satpute[1], Jochen Weber[1], Kevin Ochsner[1]
[1]Columbia University, New York, NY

290 The Event-Related Potential Correlates of Emotional Reappraisal during The Regulation Instruction
An Hyeon Min[1], In Jae Hwang[2], Ji Woon Jeong[2], Hyun Taek Kim[2], Sang Hee Kim[3]
[1]Dept. Of Brain And Cognitive Engineering, Korea University, Republic Of Korea, [2]Dept. Of Psychology, Korea University, Seoul, Korea, Republic of, [3]Dept. Of Brain And Cognitive Engineering, Korea University, Seoul, Korea, Republic of

291 Cognitive modulation of emotion processing in response to angry faces
Kyoung-Uk Lee[1], Sarah Garfinkel[2], Shao-Shuan Ho[2], Stephan Taylor[2], Israel Liberzon[2]
[1]The Catholic University of Korea, Seoul, Korea, [2]University of Michigan, Ann Arbor, United States

292 The influence of stimulus duration on brain activations during the emotional discrimination task
Ji-Won Chun[1,2,3], Sung-Hyon Kyeong[1,2], Jae-Jin Kim[4], Hae-Jeong Park[1,2]
[1]Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [2]Department of Radiology, Nuclear Medicine and Research Institute of Radiological Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, [3]Department of Psychiatry and institute of Behavioral Science in Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic of, [4]Department of Psychiatry and institute of Behavioral Science in Medicine, Yonsei University College, Seoul, Korea, Republic of

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293 Neural basis of the aesthetic experience with fractal images : an fMRI study
eunae lee[1], Seungbok Lee[1], Jungwoo Son[2], Seongwoo Jo[1], Momo Kim[1]
[1]Department of Psychology, Chungbuk National University, Cheongju, Korea, Republic of, [2]Department of Neuropsychiatry, College of Medicine, Chungbuk National University, Cheongju, Korea, Republic of

Genetics

Genetic Association Studies

294* Genetic associations of brain structure to serum transferrin: an MRI and DTI analysis (N=615), (O-W3)
Neda Jahanshad[1], Kori Johnson[2], Katie McMahon[2], Greig de Zubicaray[3], Sarah Medland[4], Grant Montgomery[4], Nicholas Martin[4], Margaret Wright[4], Arthur Toga[1], Paul Thompson[1]
[1]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [2]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [3]University of Queensland, School of Psychology, Brisbane, Australia, [4]Queensland Institute of Medical Research, Brisbane, Australia

295* Shared molecular architecture of craniofacial and brain development, (O-W3)
M. Mallar Chakravarty[1], Hervé Abdi[2], Manon Bernard[3], Natasa Kovacevic[4], Gabriel Leonard[5], Michel Perron[6], Bruce Pike[7], Louis Richer[6], Suzanne Veillette[8], Zdenka Pausova[3], Tomas Paus[1]
[1]Rotman Research Institute - Baycrest, Toronto, Ontario, [2]The University of Texas at Dallas, Richardson, TX, [3]Hospital for Sick Children, Toronto, Ontario, [4]Rotman Research Institute, Baycrest, Toronto, Ontario, [5]Montreal Neurological Institute, McGill University, Montreal, Quebec, [6]University of Quebec at Chicoutimi, Chicoutimi, Quebec, [7]Montreal Neurological Institute, Montreal, Quebec, [8]CEGEP Jonquiere, Jonquiere, Quebec

296 Genetics of cerebral connectivity and the integrity of cerebral white matter
Peter Kochunov[1], John Blangero[2], Anderson Winkler[3], Peter Fox[1], Ravindranath Duggirala[2], David Glahn[3]
[1]University Of Texas Health Science Center At San Antonio, San Antonio, United States, [2]Department of Genetics, Southwest Foundation for Biomedical Research, San Antonio, United States, [3]Yale University, Hartford, CT

297 Schizophrenia Risk Variant in NTRK1 Relates to Lower White Matter Integrity in Young Healthy Adults
Meredith Braskie[1], Neda Jahanshad[1], Jason Stein[1], Marina Barysheva[1], Katie McMahon[2], Greig de Zubicaray[3], Nicholas Martin[4], Margaret Wright[4], John Ringman[5], Arthur Toga[1], Paul Thompson[1]
[1]Laboratory of Neuro Imaging, UCLA, Los Angeles, USA, [2]University of Queensland, Brisbane, Australia, [3]University Of Queensland, Brisbane, Australia, [4]Queensland Institute of Medical Research, Brisbane, Australia, [5]UCLA, Los Angeles, USA

298 The activity and connectivity of the resting-state networks were modulated by the COMT val158met
Bing Liu[1], Ming Song[2], Yonghui Li[3], Chunshui Yu[4], Tianzi Jiang[5]
[1]CMC,Institute of Automation, Chinese Academy of Sciences, Beijing, China, [2]Beijing, [3]Institute of Automation, Chinese Academy of Sciences, Beijing, China, [4]Tianjin Medical University General Hospital, Tianjin, China, [5]Institute Of Automation, Chinese Academy Of Sciences, Beijing, China

299 *ESR1* genetic variation differentially influences brain morphology by sex
Susan Conroy[1], Kwangsik Nho[1], Brenna McDonald[1], Shannon Risacher[1], Sungeon Sun Kim[1], Tatiana Foroud[1], Clifford Jack Jr[2], Michael Weiner[3], Li Shen[1], Andrew Saykin[1]
[1]Indiana University School of Medicine, Indianapolis, IN, [2]Mayo Clinic, Rochester, MN, [3]UC San Francisco, Department of Veterans Affairs Medical Center, San Fransisco, CA

300 Genome-Wide Association Meta-Analysis of Hippocampal Volume via the ENIGMA Consortium
The ENIGMA Consortium

301 KIBRA polymorphism is related to brain structure and function during reward anticipation
Claudia Preuschhof[1], Hannah Brühl[1], Nils Bodammer[2], Shu-Chen Li[2], Lars Bäckman[3], Ulman Lindenberger[2], Hauke Heekeren[4]
[1]Freie Universität Berlin, Berlin, Germany, [2]Max Planck Institute for Human Development, Berlin, Germany, [3]Aging Research Center - Karolinska Institutet/Stockholm University, Stockholm, Sweden, [4]Department of Education and Psychology, Freie Universitaet Berlin, Berlin, Germany

302 The NOS1 polymorphism rs6490121 is associated with variation in prefrontal function and gray matter
Emma Rose[1], Ciara Greene[2], Derek Morris[1], Ciara Fahey[1], Sarah Jacobson[3], Ian Roberston[1], Hugh Garavan[1], Michael Gill[1], Aiden Corvin[1], Gary Donohoe[1]
[1]Trinity College Dublin, Dublin, Ireland, [2]Imperial College, London, United Kingdom, [3]UCLA, Los Angeles, CA

303 Shared Dopamine and nAChR β5 Gene Effect on Cingulate Functional Connectivity and Nicotine Addiction

Elliot Hong[1], Colin Hodgkinson[2], Yihong Yang[3], Pei-Hong Shen[4], Hemalatha Sampath[5], Hong Gu[3], Lauren Moran[6], Thomas Ross[7], Betty Jo Salmeron[7], Gunvank Thaker[5], David Goldman[2], Elliot Stein[7]
[1]Maryland Psychiatrie Research Center, Baltimore, United States, [2]NIAAA-IRP, NIH, Rockville, United States, [3]Neuroimaging Research Branch, National Institute on Drug Abuse, National Institutes of Health, Baltimore, MD, [4]NIAAA, DC, MD, [5]MPRC, Baltimore, MD, [6]Maryland Psychiatric Research Center, Baltimore, MD, [7]Neuroimaging Research Branch, National Institute on Drug Abuse, Baltimore, MD

304 The Effect of Dyslexia Related Genes on White Matter Structure in a Normal Sample during Childhood

Fahimeh Darki[1], Myriam Peyrard-Janvid[2], Hans Matsson[2], Juha Kere[2], Torkel Klingberg[1]
[1]Neuroscience Department, Karolinska Institutet, Stockholm, Sweden, [2]Department of Biosciences and Nutrition, Karolinska Institutet, Huddinge, Sweden, Sweden

305 Influence of Candidate AlzGene SNPs on Hippocampal Shape: A Study of the ADNI Cohort

Jing Wan[1], Sungeun Kim[1], Kwangsik Nho[1], Shannon Risacher[1], Shanker Swaminathan[1], Lars Bertram[2], Clifford Jack Jr[3], Michael Weiner[4], Faisal Beg[5], Lei Wang[6], Andrew Saykin[7], Li Shen[1]
[1]Indiana University School of Medicine, Indianapolis, IN, [2]Max-Planck Institute for Molecular Genetics, Berlin, Germany, [3]Mayo Clinic, Rochester, MN, [4]UC San Francisco, Department of Veterans Affairs Medical Center, San Fransisco, CA, [5]Simon Fraser University, Burnaby, B.C., [6]Northwestern University Feinberg School of Medicine, Chicago, United States, [7]Indiana University School of Medicine, Indianapolis, United States

306 Association between KCTD8 and Brain Volume as Revealed in a Genome-wide Study

Tomas Paus[1,2], Manon Bernard[3], M. Mallar Chakravarty[1], Anbarasu Lourdusamy[4], Gabriel Leonard[2], Michel Perron[5], Bruce Pike[2], Louis Richer[5], Gunter Schumann[4], Suzanne Veillette[6], Zdenka Pausova[3]
[1]Rotman Research Institute, Baycrest, Toronto, Ontario, Canada, [2]Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada, [3]Hospital for Sick Children, Toronto, Ontario, Canada, [4]Institute of Psychiatry, King's College, London, United Kingdom, [5]University of Quebec at Chicoutimi, Chicoutimi, Quebec, Canada, [6]CEGEP Jonquiere, Jonquiere, Quebec, Canada

307 Partial Replication of ZNF804A Risk-Status Dependent Alterations in Prefrontal Connectivity

Frieder Paulus[1], Sören Krach[2], Johannes Bedenbender[3], Axel Krug[4], N Shah[5], Marcella Rietschel[6], Tilo Kircher[7], Andreas Jansen[8]
[1]Department of Psychiatry, Philipps University Marburg, Germany, Marburg, Germany, [2]Department of Psychiatry, Section of BrainImaging, University of Marburg, Marburg, Germany, [3]Philipps-University Marburg, [4]Department of Psychiatry and Psychotherapy, Philipps-University Marburg, Marburg, Germany, [5]Forschungszentrum Jülich, Jülich, Germany, [6]Central Institute of Mental Health, Mannheim, Germany, [7]Department of Psychiatry und Psychotherapy, Philipps-University Marburg, Marburg, Germany, [8]Department of Psychiatry and Psychotherapy, Section of BrainImaging, University of Marburg, Marburg, Germany

308 Genetic Determinants of Dopamine Effects on Skill Learning and Cortical Plasticity

Kristin Pearson Fuhrhop[1], Brian Minton[2], Daniel Acevedo[2], Steven Cramer[3]
[1]University of California, Irvine, [2]University of California, Irvine, Irvine, CA, [3]University of California, Irvine, Orange, CA

309 Genetic determinants of cortical myelination. Evidence for RORA gene

Peter Kochunov[1], David Glahn[2], Anderson Winkler[2], Jack Lancaster[1], Peter Fox[1], Jack Kent[3], Ravindranath Duggirala[3], John Blangero[3]
[1]The University of Texas Health Science Center at San Antonio, San Antonio, United States, [2]Yale University, Hartford, CT, [3]Department of Genetics, Southwest Foundation for Biomedical Research, San Antonio, United States

310 Effect of NPY gene on brain activation during emotional processing in anxious depressed

Esther Opmeer[1,2], Rudie Kortekaas[3], Marie-JosÃ© van Tol[4], Nic van der Wee[4], Saskia Woudstra[5], Zoltan Bochdanovitz[5], Mark van Buchem[6], Brenda Penninx[5], Witte Hoogendijk[5], Dick Veltman[7], A. Aleman[8]
[1]university medical center groningen, [2]university of Groningen, Groningen, Netherlands, [3]university medical center groningen, Groningen, Netherlands, [4]LUMC, Leiden, Netherlands, [5]VUMC, Amsterdam, Netherlands, [6]LUMC, Groningen, Netherlands, [7]VU University Medical Center, Department of Psychiatry, Amsterdam, Netherlands, [8]University Medical Center Groningen, Groningen, Netherlands

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311 Common gene variants in the MHC region associate with cerebral ventricular size in schizophrenia
Ingrid Agartz[1,2], Andrew Brown[3], Lars Rimol Rimol[1], Cecilie Hartberg[1], Anders Dale[4], Ingrid Melle[5], Srdjan Djurovic[6], Ole Andreassen[5]
[1]Institute of Clinical Medicine, University of Oslo, Oslo, Norway, [2]Department of Research and Development, Diakonhjemmet Hospital, Oslo, Norway, [3]University Of Oslo, Oslo, Norway, [4]Department of Neurosciences and Department of Radiology, University of California San Diego, San Diego, CA, [5]Institute of Clinical Medicine, Division of Mental Health and Addiction, University of Oslo, Oslo, Norway, [6]Department of Medical Genetics, Oslo University Hospital, Oslo, Norway

312 Genetic contributions to the midsagittal area of the corpus callosum
Kimberley Phillips[1,2], Peter Kochunov[3]
[1]Trinity University, [2]Southwest Foundation for Biomedical Research, San Antonio, TX, [3]UTHSCSA, San Antonio, United States

313 The association of genetic variation in CACNA1C with frontotemporal neural system
Fei Wang[1], Andrew McIntosh[2], Yong He[3], Joel Gelernter[4], Hilary Blumberg[4]
[1]Yale University, [2]University of Edinburgh, Edinburgh, United Kingdom, [3]Beijing Normal University, Beijing, China, [4]Yale University, New Haven, CT

Genetics

Genetic Modeling and Analysis Methods

314 ** **Multi-SNP Effects on Temporal Lobe Structure Replicated in ADNI (N=738) and Queensland Twins (N=568)**
Omid Kohannim[1], Derrek Hibar[1], Jason Stein[1], Neda Jahanshad[1], Katie McMahon[2], Greig de Zubicaray[3], Nicholas Martin[4], Margaret Wright[4], Andrew Saykin[5], Clifford Jack, Jr.[6], Michael Weiner[7], Arthur Toga[1], Paul Thompson[1], the Alzheimer's Disease Neuroimaging Initiative (ADNI)[8]
[1]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [2]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [3]University of Queensland, School of Psychology, Brisbane, Australia, [4]Queensland Institute of Medical Research, Brisbane, Australia, [5]Indiana University School of Medicine, Indianapolis, United States, [6]Mayo Clinic, Department of Radiology, Rochester, MN, [7]UC San Francisco, Department of Veterans Affairs Medical Center, San Fransisco, CA, [8]NIA ADEAR Center, Bathesda, MD

315 Discovering The Network Topology of Gene Action on Brain Microstructure: An N=531 Twin Study
Ming-Chang Chiang[1], Marina Barysheva[1], Katie McMahon[2], Greig de Zubicaray[3], Kori Johnson[2], Nicholas Martin[4], Arthur Toga[1], Margaret Wright[4], Paul Thompson[1]
[1]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [2]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [3]University of Queensland, School of Psychology, Brisbane, Australia, [4]Queensland Institute of Medical Research, Brisbane, Australia

316* **Bridging the gap between imaging and genetics: a multivariate statistical investigation, (O-W3)**
Edith Le Floch[1], Christophe Lalanne[2], Philippe Pinel[3], Antonio Moreno[3], Laura Trinchera[4], Arthur Tenenhaus[4], Bertrand Thirion[5], Jean Baptiste Poline[1], Vincent FROUIN[1], Edouard Duchesnay[1]
[1]CEA Neurospin, Saclay, France, [2]AP-HP, Inserm, Paris, France, [3]Inserm, Gif-sur-Yvette, France, [4]Supélec, Gif-sur-Yvette, France, [5]INRIA Futurs, Orsay, France

317 Screening the association scores with fMRI phenotypes in an imaging-genetics study
Vincent FROUIN[1], Yannick Schwartz[2], Benjamin Thyreau[1], Edith LeFloch[1], Edouard Duchesnay[1], Alexis Barbot[1], Jean-Baptiste Poline[1]
[1]CEA Neurospin, Gif sur Yvette, France, [2]CEA, Gif sur Yvette, France

318 Heritability of white matter tract density within the working memory network
Gabriella Blokland[1], Nathan Hageman[2], Jason Stein[3], Neda Jahanshad[4], Arthur Toga[3], Katie McMahon[5], Greig de Zubicaray[6], Margaret Wright[7], Nicholas Martin[1], Paul Thompson[8]
[1]Genetic Epidemiology Laboratory, Queensland Institute of Medical Research, Brisbane, Australia, [2]Laboratory of Neuro Imaging, Department of Neurology, UCLA School of Medicine, Los Angeles, CA, [3]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [4]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States, [5]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [6]University of Queensland, School of Psychology, Brisbane, Australia, [7]Genetic Epidemiology Laboratory, Queensland Institute of Medical Research, Brisbane, Queensland, [8]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, Los Angeles, United States

319 A Tensor-Based Morphometry Study of Twins using a New Combined Surface and Volume Registration
Natasha Lepore*[1], Anand Joshi*[2](* equal contribution), Julio Villalon Reina[2], Caroline Brun[3], James Gee[3], Greig de Zubicaray[4], Margaret Wright[5], Katie McMahon[6], Paul Thompson[7]
[1]University of Southern California and Children's Hospital Los Angeles, Los Angeles, CA, [2]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [3]PICSL Laboratory, University of Pennsylvania, Philadelphia, PA, [4]University of Queensland, School of Psychology, Brisbane, Australia, [5]Genetic Epidemiology Laboratory, Queensland Institute of Medical Research, Brisbane, Australia, [6]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [7]Laboratory of Neuro Imaging - UCLA School of Medicine, Los Angeles, CA

320 Voxelwise gene-wide association study (vGeneWAS): multivariate gene-based association testing
Derrek Hibar[1], Jason Stein[1], Omid Kohannim[1], Neda Jahanshad[1], Andrew Saykin[2], Li Shen[3], Sungeun Kim[3], Nathan Pankratz[3], Tatiana Foroud[3], Matthew Huentelman[4], Steven Potkin[5], Clifford Jack Jr[6], Michael Weiner[7], Arthur Toga[1], Paul Thompson[1]
[1]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [2]Indiana University School of Medicine, Bloomington, IN, [3]Indiana University School of Medicine, Indianapolis, IN, [4]The Translational Genomics Research Institute, Phoenix, AZ, [5]University of California Irvine, Irvine, CA, [6]Mayo Clinic, Rochester, MN, [7]UC San Francisco, Department of Veterans Affairs Medical Center, San Fransisco, CA

321 Ancestry Effects on Hippocampal Volume: Implications for Neuroimaging Studies
Gonzalo Laje[1], Allison Nugent[1], Xinmin Liu[2], Jonathon Savitz[3], Carlos Zarate, Jr.[1], Wayne Drevets[3], Francis McMahon[1]
[1]NIMH, Bethesda, MD, [2]Columbia University, New York, NY, [3]Laureate Institute for Brain Research, Tulsa, OK

322 Investigating the Joint Effect of *HFE* mutations on White Matter Structure (N=544 DTI study)
Omid Kohannim[1], Neda Jahanshad[1], Derrek Hibar[1], Jason Stein[1], Katie McMahon[2], Greig de Zubicaray[3], Sarah Medland[4], Grant Montgomery[4], John Whitfield[4], Nicholas Martin[4], Margaret Wright[4], Arthur Toga[1], Paul Thompson[1]
[1]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [2]University of Queensland, Centre for Advanced Imaging, Brisbane, Australia, [3]University of Queensland, School of Psychology, Brisbane, Australia, [4]Queensland Institute of Medical Research, Brisbane, Australia

323 Environmental Influence on Human Brain Chemistry in Late Life Appears to Be Superior to Genetics
Seyed Amir Hosein Batouli[1], Julian Trollor[2], Wei Wen[3], Perminder Sachdev[3]
[1]NeuroImaging Lab, School of Psychiatry, University of New South Wales, Sydney, NSW, Australia, [2]Department of Developmental Disability Neuropsychiatry, UNSW, Sydney, Australia, [3]Neuropsychiatric Institute, Prince of Wales Hospital, Sydney, Australia

324 Identification of Brain Functional Networks Linked to Genetic Variation: A Constrained ICA Approach
Mohammad Ghassemi[1], Jingyu Liu[1], David Boutte[1], Sandy Wells[2], Nora Perrone-Bizzozero[3], Fabio Macciardi[4], Daniel Mathalon[5], Judith Ford[5], Steven Potkin[4], Jessica Turner[1], Vince Calhoun[1,6], Andrew Michael[1]
[1]The Mind Research Network, Albuquerque, United States, [2]Department of Radiology, Harvard Medical School, Boston, United States, [3]Department of Neurosciences, University of New Mexico, Albuquerque, United States, [4]Department of Psychiatry and Human Behavior, University of California, Irvine, United States, [5]Veterans Affairs Medical Center, University of San Francisco, San Francisco, United States, [6]Department of ECE, University of New Mexico, Albuquerque, United States

325 Genetic Patterning of Cortical Arealization of the the Human Brain
Chi-Hua Chen[1], Matthew Panizzon[1], Christine Fennema-Notestine[1], Lisa Eyler[1], Amy Jak[1], Michael Neale[2], Carol Franz[1], Samar Hamza[1], Terry Jernigan[1], Michael Lyons[3], Michael Grant[3], Bruce Fischl[4], Larry Seidman[5], Ming Tsuang[1], Anders Dale[1], William Kremen[1]
[1]University of California, San Diego, La Jolla, United States, [2]Virginia Commonwealth University, Richmond, United States, [3]Boston University, Boston, United States, [4]Harvard Medical School and Massachusetts General Hospital, Boston, United States, [5]Harvard University, Boston, United States

Genetics

Neurogenetic Syndromes

326 ** Lovastatin normalizes the brain spontaneous low-frequency fluctuations in children with nf1**
camille chabernaud[1], Maarten Mennes[1], Peter Kardel[2], William Gaillard[3], Layne Kalbfleisch[4], John Van Meter[5], Roger Packer[2], Michael Milham[1], F. Xavier Castellanos[1], Maria Acosta[2]
[1]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, United States, [2]Jennifer and Daniel Gilbert Neurofibromatosis Institute, Children's National Medical Center, Washington DC, United States, [3]The Center for Neuroscience and Behavioral Medicine, Children's National Medical Center, Washington DC, United States, [4]George Mason University, South Ridge, United States, [5]Center for Functional and Molecular Imaging, Georgetown University Medical Center, Washington DC, United States

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327 Williams syndrome genes LIMK1, CLIP2 interact to impact performance, gray matter in healthy humans
Jonathan Kippenhan[1], Andreas Meyer-Lindenberg[2], Venkata Mattay[3], Bhaskar Kolachana[4], Philip Kohn[4], Dwight Dickinson[4], Daniel Weinberger[3], Karen Berman[5]
[1]National Institutes of Health, NIMH, IRP, Bethesda, MD, [2]Central Institute of Mental Health (CIMH) Mannheim, Mannheim, Germany, [3]National Institute of Mental Health, National Institutes of Health, Bethesda, MD, [4]National Institutes of Health, Bethesda, MD, [5]National Institutes Of Health, NIMH, IRP, Bethesda, United States

328 DTI maps of white matter abnormalities in 22q11.2 deletion syndrome, Fragile X and Turner syndrome
Julio Villalon Reina[1], Neda Jahanshad[2], Arthur Toga[3], Paul Thompson[1], Tony Simon[4]
[1]Laboratory of Neuro Imaging - UCLA School of Medicine, Los Angeles, CA, [2]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA, [3]UCLA School of Medicine, Department of Neurology, Los Angeles, CA, [4]Cognitive Analysis & Brain Imaging Laboratory-M.I.N.D. Institute & NeuroTherapeutics Research Inst, Davis, CA

329 Grey and white matter changes in infantile myotonic dystrophy type 1
Herve Lemaitre[1], Aurelia Jacquette[2], Sandra Whalen[2], Bruno Eymard[3], Isabelle Desguerre[2], Francis Brunelle[4,1], David Grevent[4,1], Monica Zilbovicius[1,5], Delphine Heron[2], Nathalie Boddaert[4,1]
[1]INSERM U1000, Paris Descartes, Faculté de Medecine Paris-Sud 11, Orsay, France, [2]Hopital Pitie Salpetriere, APHP, Département de Genetique, Paris, France, [3]Hopital Pitie Salpetriere, APHP, Institut de Myologie, Paris, France, [4]Hopital Necker, APHP, Enfants malades, Paris, France, [5]Hopital Necker, APHP, Enfants malades, Paris, France, France

330 Comparing Diffusion Tensor Imaging in Neurofibromatosis type I vs. Normal Children and Adults
Nicolás Lori[1,2], Maria Ribeiro[1,2], Ines Violante[1,2], Miguel Castelo-Branco[1,2]
[1]IBILI, Faculty of Medicine, University of Coimbra, Coimbra, Portugal, [2]National Brain Imaging Network, Portugal

331 Diffusion Imaging in Individuals with Partial Deletions of the Williams Syndrome Critical Region
Dharshan Chandramohan[1], Matthew Geramita[1], Lindsay Walker[2], Katherine Roe[3], Shane Kippenhan[3], Aarthi Padmanabhan[3], Phillip Kohn[3], Carolyn Mervis[4], Ariel Pani[5], Colleen Morris[6], Daniel Weinberger[7], Carlo Pierpaoli[2], Stefano Marenco[1], Karen Berman[3]
[1]Unit on Multimodal Imaging Genetics, CBDB, NIMH-IRP, Bethesda, MD, [2]Section on Tissue Biophysics and Biomimetics, NICHD-IRP, Bethesda, MD, [3]Section on Integrative Neuroimaging, CBDB, NIMH-IRP, Bethesda, MD, [4]Neurodevelopmental Sciences Lab, University of Louisville, Louisville, KY, [5]Dept. of Biochemistry and Molecular Biology, University of Louisville, Louisville, KY, [6]Genetics Division, Dept of Pediatrics, University of Nevada School of Medicine, Las Vegas, NV, [7]GCAP/CBDB, NIMH-IRP, Bethesda, MD

332 Brain related acute and long term effects of leptin therapy in a congenital leptin deficient patient
Sabine Frank[1,2], Martin Heni[3,4], Anja Moss[5], Julia von Schnurbein[5], Andreas Fritsche[3,4], Hans-Ulrich Haering[3,4], Sadaf Farooqi[6], Hubert Preissl[1,7], Martin Wabitsch[5]
[1]MEG Center, University of Tuebingen, Tuebingen, Germany, [2]Graduate School of Neural & Behavioural Sciences, International Max Planck Research School, Tuebingen, Germany, [3]Department of Internal Medicine, Division of Endocrinology, Eberhard Karls University Tuebingen, Tuebingen, Germany, [4]Member of the German Centre for Diabetes Research DZD, Tuebingen, Germany, [5]Division of Pediatric Endocrinology, Dep. of Pediatrics and Adolescent Medicine, University of Ulm, Ulm, Germany, [6]Metabolic Research Laboratories, Institute of Metabolic Science, Addenbrooke's Hospital, Cambridge, United Kingdom, [7]Department of Obstetrics and Gynecology, University of Arkansas for Medical Sciences, Little Rock, AR

333 Variants of FTO modulate reward-related behavior and the central control of hunger and satiety
Annette Horstmann[1], Joeran Lepsien[2], Haiko Schloegl[3], Stefan Kabisch[3], Franziska Busse[3], Peter Kovacs[4], Michael Stumvoll[5], Arno Villringer[2], Burkhard Pleger[2]
[1]IFB Adiposity Diseases, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]Department of Medicine, University of Leipzig, Leipzig, Germany, [4]Interdisciplinary Center of Clinical Research, University of Leipzig, Leipzig, Germany, [5]IFB Adiposity Diseases, University of Leipzig, Leipzig, Germany

334 Morphologic alterations in brain structure in patients with WAGR/11p deletion syndrome
Julie McEntee[1], John Butman[2], Dzung Pham[1], Shannon Fuhr[3], Amanda Huey[3], Stephen Sharp[4], Jack Tsao[4], Joan Han[3]
[1]Henry M. Jackson Foundation, Rockville, MD, [2]NIH Clinical Center, Bethesda, MD, [3]NICHD, Bethesda, MD, [4]USUHS, Bethesda, MD

Informatics

Atlases

335 A High-Resolution Full-Brain Probabilistic Atlas of Regions Based on Cortical-Folds
Matthieu Perrot[1], Gael Varoquaux[2], Denis Rivière[1], Jean-François Mangin[1]
[1]NeuroSpin, CEA, Gif-sur-Yvette, France, [2]Neurospin, INRIA, Gif-sur-Yvette, France

336 The Allen Human Brain Atlas: An Online Resource Integrating MR and Genome-Wide Gene Expression Data
Elaine Shen[1], Darren Bertagnolli[1], Barry Daly[2], Chinh Dang[1], Angela Guillozet-Bongaarts[1], Rao Gullipalli[2], Michael Hawrylycz[1], John Hohmann[1], Chris Lau[1], Changkyu Lee[1], Ed Lein[1], Alan McMillan[2], Lydia Ng[1], Caroline Overly[1], John Phillips[1], Zackery Riley[1], Kimberly Smith[1], Susan Sunkin[1], Paul Wohnoutka[1], Allan Jones[1]
[1]Allen Institute for Brain Science, Seattle, WA, [2]University of Maryland School of Medicine, Baltimore, MD

337 NeuroMorphoNaut: An Open Source Tool to Make Anatomy Less Tedious
Andrew Worth[1], Gregory Millington[1], Jason Tourville[2]
[1]Neuromorphometrics, Inc., Somerville, MA, [2]Department of Cognitive and Neural Systems, Boston University, Boston, MA

338 Cortical Surface-based Atlases: Improvements to the fsaverage Atlas and Inter-atlas Transformations
David Van Essen[1], Matthew Glasser[2], Timothy Coalson[3], Donna Dierker[4], John Harwell[3]
[1]Washington University, [2]Washington University in St. Louis, [3]Washington University, St. Louis, MO, [4]Washington University School of Medicine, Creve Coeur, United States

339 Automatic MNI atlas labeling for Chinese Brain Template using 3D nonlinear registration
Chia-Ming Chang[1], Che-Wei Chang[2], Tun Jao[2], Chien-Chang Ho[2], Jyh-Horng Chen[2]
[1]National Taiwan University, Taiwan, [2]National Taiwan University, Taipei, Taiwan, Republic of China

340 Teaching neuroanatomy using Iphone and IPad
Pedro Paulo Oliveira Jr[1,2], Bruce Fischl[3], Edson Amaro[4]
[1]Netfilter.com, São Paulo, Brazil, [2]University Of Sao Paulo, São Paulo, Brazil, [3]Harvard Medical School and Massachusetts General Hospital, Boston, United States, [4]University Of Sao Paulo, Sao Paulo, SP, Brazil

Informatics

Databasing and Data Sharing

341* Establishing Datasharing Standards in Neuroimaging, (O-W3)
Standards for Neuroimaging Datasharing Task Force[1]
[1]International Neuroinformatics Coordinating Facility, Stockholm, Sweden

342* Towards large-scale automated synthesis of the human neuroimaging literature, (O-W3)
Tal Yarkoni[1], Russell Poldrack[2], Thomas Nichols[3], David Van Essen[4], Tor Wager[5]
[1]University of Colorado at Boulder, Boulder, USA, [2]University of Texas at Austin, Austin, USA, [3]University of Warwick, Dept. of Statistics, Coventry, UK, [4]Washington University, St. Louis, USA, [5]University of Colorado at Boulder, Boulder, USA

343 The International Neuroimaging Data-sharing Initiative (INDI) and the Functional Connectomes Project
Michael Milham[1,2], Maarten Mennes[1], David Gutman[1], Randy Buckner[3], Cameron Craddock[4], Daniel Margulies[5], Yufeng Zang[6], Bharat Biswal[7], J.K. Buitelaar[8], Vince Calhoun[9], Stan Colcombe[2], Eliza Congdon[10], Daniel Dickstein[11], Damien Fair[12], Matthew Hoptman[2], Maria de la Iglesia Vaya[13], George Andrew James[14], Rex Jung[9], Clare Kelly[1], David Kennedy[15], Kent Kiehl[9], Clint Kilts[14], Art Kramer[16], Stephen LaConte[4], Bennet Leventhal[2], Beatriz Luna[17], Larry Maayan[2], David Madden[18], Luis Martí-Bonmatí[19], Andrew Mayer[9], Stewart Mostofsky[20], Joel Nigg[12], Kate Nooner[2], James Pekar[20], Russell Poldrack[21], Erika Proal[1], Julie Schweitzer[22], Katerina Velanova[17], Arno Villringer[5], Xi-Nian Zuo[23], F. Xavier Castellanos[1,2]
[1]NYU Langone Medical Center, New York, NY, [2]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY, [3]Harvard University, Cambridge, MA, [4]Virginia Tech, Roanoke, VA, [5]Max Planck Institute, Leipzig, Germany, [6]Beijing Normal University, Beijing, China, [7]University of Medicine and Dentistry of New Jersey, Newark, NJ, [8]Donders Center for Cognitive Neuroscience, Nijmegen, Netherlands, [9]The Mind Research Network, Albuquerque, NM, [10]University of California Los Angeles, West Hollywood, CA, [11]Brown University School of Medicine, Providence, RI, [12]Oregon Health and Science University, Portland, OR, [13]Centre of Excellence for Biomedical Imaging, Valencia, Spain, [14]University of Arkansas for Medical Sciences, Little Rock, AR, [15]University of Massachusetts Medical Center, Worcester, MA, [16]University of Illinois at Urbana-Champagne, Urbana-Champagne, IL, [17]University of Pittsburgh, Pittsburgh, PA, [18]Duke University Medical Center, Durham, NC, [19]La Fe University and Polytechnic Hospital, Valencia, Spain, [20]Kennedy Krieger Institute, Baltimore, MD, [21]University of Texas at Austin, Austin, TX, [22]UC Davis M.I.N.D. Institute, Sacramento, CA, [23]Chinese Academy of Sciences, Beijing, China

344 BrainBrowser: Web-based 3D Visualization for the MACACC Dataset and Other Surface Data
Nicolas Kassis[1], Gaolang Gong[2], Marc-Étienne Rousseau[3], Reza ADALAT[4], Alan Evans[5]
[1]Montreal Neurological Institute and Hospital, Mcgill Univeristy, [2]Montreal Neurological Institute And Hospital, McGill University, Canada, [3]Montreal Neurological Institute (MNI) and Hospital, Mcgill University, Montreal, Québec, [4]Montreal Neurological Institute, McGill University, Montreal, Canada, [5]McGill University, Montreal, Canada

345 The Neuroimaging Informatics Tools and Resources Clearinghouse (NITRC)
David Kennedy[1], Christian Haselgrove[1], Jeffrey Grethe[2]
[1]University of Massachusetts Medical School, Worcester, United States, [2]UCSD, San Diego, United States

346 NeuroLOG: A framework for the sharing and reuse of distributed tools and data in neuroimaging
Michel Dojat[1], Mélanie Pélégrini-Issac[2,3], Farooq Ahmad[4], Christian Barillot[4], Bénédicte Batrancourt[5,3], Alban Gaignard[6], Bernard Gibaud[4], Pascal Girard[1,7], David Godard[8], Gilles Kassel[9], Diane Lingrand[6], Grégoire Malandain[7], Franck Michel[4], Johan Montagnat[6], Xavier Pennec[7], Javier Rojas Balderrama[6], Bacem Wali[4]
[1]INSERM / Université Joseph Fourier, U836, Institut des Neurosciences, Grenoble, France, [2]INSERM / UPMC Univ. Paris 06, UMR_S678, Laboratoire d'Imagerie Fonctionnelle, Paris, France, [3]Univ. Paris 11, IFR49, Gif-sur-Yvette, France, [4]INSERM / INRIA / CNRS / Univ. Rennes 1, IRISA Unit VISAGES U746, Rennes, France, [5]INSERM / CNRS / UPMC Univ. Paris 06, UMR_S975 CRICM, Paris, France, [6]CNRS / UNS, I3S lab, MODALIS team, Sophia Antipolis, France, [7]INRIA, ASCLEPIOS team, Sophia Antipolis, France, [8]Visioscopie, Nice, France, [9]Univ. de Picardie Jules Verne, MIS, EA 4290, Amiens, France

347 brainSCANr: Mapping Brain Structure, Function, and Disease Relationships with PubMed
Bradley Voytek[1], Jessica Voytek[1]
[1]University of California, Berkeley, Berkeley, CA

348 An Online Shared Database of ASL-based CBF Measures with Integrated Processing Pipeline
David Shin[1], Burak Ozyurt[2], Thomas Liu[1]
[1]UCSD Center for fMRI, La Jolla, CA, [2]University of California San Diego, La Jolla, CA

349 Developmental brain ADC atlas creation from clinical images
Randy Gollub[1], Vincent Roch[2], Patricia Grant[3], Rudolph Pienaar[4], Lilla Zollei[1], Yanbing Wang[1], Darren Sack[1], Katherine Andriole[5], Jesse Wei[6], William Tellier[4], Daniel Marcus[7], Steven Pieper[8], Christopher Herrick[1], Shawn Murphy[1]
[1]Massachusetts General Hospital, Boston, MA, [2]Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland, [3]Fetal-Neonatal Neuroimaging & Developmental Science Center, Children's Hospital Boston, Boston, MA, [4]Children's Hospital Boston, Boston, MA, [5]Brigham & Women's Hospital, Boston, MA, [6]Beth Israel Deaconess Medical Center, Boston, MA, [7]Washington University, St. Louis, MO, [8]Isomics, Boston, MA

350 Networks in the Cloud: Web-Based Neuroimaging Connectivity Matrix Analysis and Data Sharing
Jesse Brown[1], Jeffrey Rudie[1], Susan Bookheimer[1]
[1]UCLA, Los Angeles, CA

351 An innovative neuroinformatics tool suite built for large heterogeneous datasets
Margaret King[1], William Courtney[1], Raul de la Garza[1], Susan Rati Lane[1], Adam Scott[1], Dylan Wodd[1], Vince Calhoun[2]
[1]The Mind Research Network, Albuquerque, NM, [2]The Mind Research Network, Albuquerque, United States

352 BrainMap Behavior Profiles
Jack Lancaster[1], Angela Laird[1], P Fox[1], Michael Martinez[1], Peter Fox[1]
[1]UTHSCSA - Research Imaging Institute, San Antonio, TX

353 A real-time fMRI communication interface for Turbo-BrainVoyager using the TBV 3.0 Plugin Interface
Michael Lührs[1], Charles Mueller[2], Johannes Bernarding[3]
[1]IBMI, Otto-Von-Guericke-University, Magdeburg, Germany, [2]IBMI, Otto-Von-Guericke-University, Germany, [3]Otto Von Guericue University, Magdeburg, Germany

354 PyXNAT: a Python interface for XNAT
Yannick Schwartz[1], Alexis Barbot[1], Frouin Vincent[1], Benjamin Thyreau[1], Gael Varoquaux[2], Bertrand Thirion[3], Jean-Baptiste Poline[1]
[1]CEA Neurospin, Paris, France, [2]INSERM Neurospin, Paris, France, [3]INRIA Parietal, Paris, France

355 NeuroPub Visualizer v2: a NIfTI visualisation tool for iPad, iPhone and Mac OS X
Lars Forsberg[1,2]
[1]Karolinska Institutet, Stockholm, Sweden, [2]Icelandic Heart Association, Reykjavik, Iceland

356 NEO: a Data Model for Electrophysiological Data Representation and its Python Implementation
Florent JAILLET[1], Samuel Garcia[2], Andrew Davison[3], Luc Estebanez[3], Pierre Yger[3]
[1]INCM, CNRS UMR 6193 - Université de la Méditerranée, Marseille, France, [2]NSCC, CNRS UMR 5020 - Université Claude Bernard, Lyon, France, [3]UNIC, CNRS UPR 3293, Gif-sur-Yvette, France

357 Hybrid Linking of Multiple Primate Cortical Parcellations to a Single Atlas Space
Gleb Bezgin[1], Rembrandt Bakker[2]
[1]Rotman Research Institute at Baycrest, McIntosh lab, Toronto, Canada, [2]Donders Institute at UMC Radboud, Nijmegen, Netherlands

358 Graphical Knowledge Discovery for Neuroimaging Archives
Ian Bowman[1], Shantanu Joshi[1], John Van Horn[1]
[1]UCLA, Los Angeles, United States

Informatics

Pipelines

359 Lipsia 2.0 – a software package for analyzing MRI/fMRI/rs-fMRI data
Gabriele Lohmann[1], Eric Tuerke[1], Thomas Proeger[1], Enrico Reimer[1], Lydia Hellrung[2], Dirk Goldhahn[1], Karsten Mueller[1], Michael Hanke[3], Daniel Margulies[4], Arno Villringer[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences Leipzig, Leipzig, Germany, [3]Dartmouth College, NH, USA, [4]Berlin School of Mind and Brain, Humboldt University, Berlin , Germany

360 Soma-Workflow: open source software for easy access to parallel computing resources
Soizic Laguitton[1], Denis Rivière[2], Dominique Geffroy[1], Nicolas Souedet[3], Yann Cointepas[1]
[1]CEA NeuroSpin, Paris, France, [2]NeuroSpin, CEA, Orsay, France, [3]CEA MIRCen, Paris, France

361 A neuroimaging analysis kit for Matlab and Octave
Pierre Bellec[1], Felix Carbonnell[2], Vincent Perlbarg[3], Claude Lepage[4], Oliver Lyttelton[5], Vladmir Fonov[2], Andrew Janke[6], Jussi Tohka[7], Alan Evans[8]
[1]CRIUGM, Montreal , Quebec, [2]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, QC, [3]INSERM / UPMC Univ. Paris 06, UMR_S678, LIF, Paris, France, [4]Montreal Neurological Institute, McGill University, Canada, Montreal, Canada, [5]Institute of Mental Health Research Ottawa, [6]Centre for Advanced Imaging, The University of Queensland, Australia, brisbane, Australia, [7]Department of Signal Processing,Tampere University of Technology, Tampere, Finland, [8]McGill University, Montreal, Canada

362 Quality control of large-scale MRI processing by means of outlier detection
Simon Duchesne[1], Fernando Valdivia[2]
[1]CRULRG Universite Laval, Quebec City, Canada, [2]Centre de recherche Universite Laval Robert-Giffard, Quebec, Quebec

363 CHRIS: A Web-Based System for Collecting, Analyzing, and Interacting with NeuroImaging Data
Daniel Ginsburg[1], Rudolph Pienaar[1]
[1]Children's Hospital Boston, Boston, MA

364 The iBrain™ Analysis Toolbox for SPM
David Abbott[1], Richard Masterton[1], Anthony Waites[1], Kaushik Bhaganagarapu[1], Gaby Pell[1], Matthew Harvey[1], Gagan Sharma[1], Graeme Jackson[1]
[1]Brain Research Institute, Florey Neuroscience Institutes (Austin), Melbourne, Australia

365 Performing tasks in Medical Imaging with R
Karsten Tabelow[1], Brandon Whitcher[2], Joerg Polzehl[1]
[1]WIAS, Berlin, Germany, [2]GlaxoSmithKline, London, United Kingdom

HIgher Cognitive Functions

Decision Making

366* Orbitofrontal cortex distributes reinforcement to the decision that caused it, (O-T4)
Kay Brodersen[1], Laurence Hunt[2], Ekaterina Lomakina[1], Joachim Buhmann[1], Matthew Rushworth[2], Timothy Behrens[3]
[1]ETH Zurich, Zurich, Switzerland, [2]University of Oxford, Oxford, United Kingdom, [3]Oxford Centre for Functional MRI of the Brain (FMRIB), Oxford, United Kingdom

367 Automatic processing of political preferences in the human brain**
Anita Tusche[1], John-Dylan Haynes[2]
[1]Bernstein Center for Computational Neuroscience, Charité - Universitätsmedizin, Berlin, Germany, [2]Bernstein Center for Computational Neuroscience, Charité - Universitätsmedizin, Berlin, Berlin, Germany

368* Intra-parietal sulcus links decisions to actions and receives value-modulated inputs from vmPFC, (O-M2)
Miriam Klein-Flügge[1], Timothy Behrens[2], Karl Friston[3], Sven Bestmann[1]
[1]Sobell Department, Institute of Neurology, UCL, London, United Kingdom, [2]Oxford Centre for Functional MRI of the Brain (FMRIB), Oxford, United Kingdom, [3]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom

369* The amygdala becomes reward-sensitive when an outcome cannot be assigned to the correct decision, (O-M2)
Kay Brodersen[1], Laurence Hunt[2], Ekaterina Lomakina[1], Joachim Buhmann[1], Matthew Rushworth[2], Timothy Behrens[3]
[1]ETH Zurich, Zurich, Switzerland, [2]University of Oxford, Oxford, United Kingdom, [3]Oxford Centre for Functional MRI of the Brain (FMRIB), Oxford, United Kingdom

370* Sub-second measurements of dopamine release in human striatum during a sequential investment game, (O-W4)
Kenneth Kishida[1], Stefan Sandberg[2], Terry Lohrenz[3], Youssef Comair[3], Ignacio Saez[1], Paul Phillips[2], P. Montague[1]
[1]Virginia Tech Carilion Research Institute, Roanoke, VA, [2]University of Washington, Seattle, WA, [3]Baylor College of Medicine, Houston, TX

371* Trait impulsivity and interindividual differences in the neural mechanisms underlying self control, (O-M3)
Esther Diekhof[1], Lesly Nerenberg[1], Peter Falkai[1], Peter Dechent[2], Juergen Baudewig[3], Oliver Gruber[1]
[1]Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Göttingen, Germany, [2]MR-Research in Neurology and Psychiatry, University Medical Center Göttingen, Göttingen, Germany, [3]FU Berlin, Berlin, Germany

372* Led into temptation? Subliminally presented reward cues bias incidental economic decisions, (O-M2)
Stefan Bode[1,2], Juan Dominguez D.[3], Carsten Murawski[4], Philip Harris[5], Gary Egan[6,2]
[1]Psychological Sciences, The University of Melbourne, Melbourne, Victoria, [2]Florey Neuroscience Institutes, Melbourne, Australia, [3]Florey Neuroscience Institutes, Melbourne, Victoria, [4]Department of Finance, The University of Melbourne, Melbourne, Victoria, [5]Department of Management and Marketing, The University of Melbourne, Parkville, Australia, [6]Centre for Neuroscience, University of Melbourne, Melbourne, Australia

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>> Thursday, June 30: 10:30 – 13:00 (odd numbers)

373 Decision making and the medial prefrontal cortex: Are there different forms of uncertainty?
Takashi Nakao[1], Hideki Ohira[2], Georg Northoff[3]
[1]University of Ottawa Institute of Mental Health Research, Ottawa, Canada, Ottawa, Canada, [2]Graduate School of Environmental Studies, Nagoya University, Nagoya, Japan, Nagoya, Japan, [3]University of Ottawa Institute of Mental Health Research, Ottawa, Canada

374 Delay discounting is associated with a diminished functioning executive control network under rest
Lianne Schmaal[1], Anna Goudriaan[1], Wim Van den Brink[1], Dick Veltman[2]
[1]Academic Medical Center, University of Amsterdam, Department of Psychiatry, Amsterdam, Netherlands, [2]VU University Medical Center, Department of Psychiatry, Amsterdam, Netherlands

375 Reduced SN/VTA valuation and conflict responses during decision-making following sleep-deprivation
Jan Peters[1], Christian Büchel[2], Mareike Menz[3]
[1]Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Germany, [2]Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, [3]Deparment of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Germany, Hamburg, Germany

376 Delayed and probabilistic discounting in pathological gamblers
Stephan Miedl[1], Christian Büchel[2], Jan Peters[3]
[1]Neuroimage Nord, Institute for Systems Neuroscience, University-Medical Center Hamburg-Eppendorf, Hamburg, Germany, [2]NeuroimageNord, Institute for Systems Neuroscience, University-Medical Center Hamburg-Eppendorf, Ger, Hamburg, Germany, [3]NeuroimageNord, Institute for Systems Neuroscience, University-Medical Center Hamburg-Eppendorf, Hamburg, Germany

377 An 7T structural and fMRI study on the role of the STN in multiple alternative decision making
Max Keuken[1,2], Robert Turner[3], Leendert van Maanen[4], Rafal Bogacz[5], Andreas Schäfer[3], Jane Neumann[6], Birte Forstmann[4]
[1]University of Amsterdam, Utrecht, Netherlands, [2]Max-Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [4]University of Amsterdam, Amsterdam, Netherlands, [5]University of Bristol, Bristol, United Kingdom, [6]Max-Planck-Institute for Human Cognitive and Brain Science., Leipzig, Germany

378 5-HTTLPR Polymorphism Predicts Valence-dependent Risk Preference Shift and Related Amygdala Activity
M Ryan Haynes[1], Joseph Barter[1], George Christoploulos[2], Martina Ly[1], Daniel Weinberger[1], Wolfram Schultz[2], Caroline Zink[1]
[1]National Institute of Mental Health, Bethesda, MD, [2]University of Cambridge, Cambridge, United Kingdom

379 Withdrawn

380 Whether you like it or not: your product of choice elicits specific brain activation
Laura Van Der Laan[1], Denise de Ridder[2], Max Viergever[1], Paul Smeets[1]
[1]University Medical Center Utrecht, Utrecht, Netherlands, [2]Departement of Clinical and Health Psychology, University Utrecht, Utrecht, Netherlands

381 When desire collides with reason: Gender differences in the neural mechanism underlying self-control
Maria Keil[1], Oliver Gruber[1], Peter Dechent[2], Esther Diekhof[1]
[1]Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Göttingen, Germany, [2]MR-Research in Neurology and Psychiatry, University Medical Center Göttingen, Göttingen, Germany

382 Preventing impulsivity: a major role for hippocampus-mediated episodic thinking
Mael Lebreton[1], Maxime-Louis Berthoux[1], Philippe Fossati[1], Mathias Pessiglione[1]
[1]INSERM, PARIS, France

383 Manipulation of Loss Aversion by Monetary Endowment and Affect: An Event-related fMRI Study
Ranganatha Sitaram[1], Sergio Ruiz[2], Sangkyun Lee[3], Chandrasekhar Pammi[4]
[1]Institute of Medical Psychology and Behavioral Neurobiology; University of Tübingen, Tübingen, Germany, [2]Institute of Medical Psychology and Behavioural Neurobiology, University of Tuebingen, Tuebingen, Germany, [3]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany, [4]Centre of Behavioural and Cognitive Sciences, University of Allahabad, Allahabad, India

384 Associative learning in striatal subregions using high resolution fMRI
Naomi Kenner[1], Jeanette Mumford[2], Russell Poldrack[2]
[1]UCLA, Los Angeles, CA, [2]University of Texas at Austin, Austin, TX

385 Functional connectivity during free choice of an object
Markus Thimm[1], Walter Sturm[1], Ralph Weidner[2], Gereon Fink[3]
[1]University Hospital Aachen, Aachen, Germany, [2]Research Centre Juelich, Juelich, Germany, [3]Department of Neurology, University of Cologne, Cologne, Germany

386 Brainactivity in BA 8, ACC and DLPFC depends on Difficulty of Decisions and Subjective Consistency
Stephan Ripke[1], Thomas Hübner[1], Eva Mennigen[1], Kathrin Müller[1], Sarah Rodehacke[1], Dirk Schmidt[1], Michael Smolka[1]
[1]Technische Universität Dresden, Dresden, Germany

387 Neural Correlates of Bias in Perceptual Decision Making
Martijn Mulder[1], Wouter Boekel[2], Eric-Jan Wagenmakers[2], Birte Forstmann[2]
[1]University of Amsterdam, Amsterdam, The Netherlands, [2]University of Amsterdam, Amsterdam, Netherlands

388 An fMRI Investigation of the Effects of Partial Sleep Deprivation on the Speed-Accuracy Trade-off
Evan Nemeth[1], Ryan Blagdon[1], Benjamin Rusak[2], Chris Bowen[3], Jason Ivanoff[4]
[1]Saint Mary's University, Halifax, Nova Scotia, [2]Dalhousie University, Halifax, Nova Scotia, [3]National Research Council, Halifax, Nova Scotia, [4]Saint Mary's University

389 Neural Correlates of Protesting a Decision
Bidhan Lamichhane[1], Bhim Adhikari[1], Sarah Brosnan[1], Mukesh Dhamala[1]
[1]Georgia State University, Atlanta, GA

390 Task related frontoparietal oscillatory activity underlying the visual perception of velocity change
Sheng H. Wang[1,2,3], Paul Ferrari[4], Marc Lalancette[5], Eugene Simine[6], Sonya Bells[7], Douglas Cheyne[4], Mazyar Fallah[1,2,3,8,9], John Tsotsos[2,6], Joseph DeSouza[1,2,3,9]
[1]Psychology Department, York University, Toronto, Canada, [2]Centre for Vision Research, York University, Toronto, Canada, [3]Neuroscience Diploma, York University, Toronto, Canada, [4]Program in Neurosciences and Mental Health, Hospital for Sick Children Research Institute, Toronto, Canada, [5]Hospital for Sick Children Research Institute, Toronto, Canada, [6]Department of Computer Science & Engineering, York University, Toronto, Canada, [7]Department of Medical Imaging, University of Toronto, Toronto, Canada, [8]School of Kinesiology and Health Science, York University, Toronto, Canada, [9]Biology Department, York University, Toronto, Canada

391 Let's have a break: neural substrates of effort management
Florent Meyniel[1], Mathias Pessiglione[1]
[1]Motivation Brain and Behavior team, ICM, CNRS-INSERM, Universite Pierre et Marie Curie (Paris 6), France

392 Withdrawn

393 The innovative brain: a neural signature
Daniella Laureiro-Martínez[1], Nicola Canessa[2], Stefano Brusoni[3], Maurizio Zollo[4], Federica Alemanno[2], Stefano Cappa[2]
[1]Department of Management and Technology, Bocconi University, Milan, Italy, [2]Vita-Salute San Raffaele University & Division of Neuroscience San Raffaele Scientific Institute, Milan, Italy, [3]KITeS, Department of Management and Technology, Bocconi University, Milan, Italy, [4]CROMA, Department of Management and Technology, Bocconi University, Milan, Italy

394 Alcoholic Subjects Response to Prediction Error
Reza Momenan[1], Erica Grodin[1], Henry Lin[1], Daniel Hommer[1]
[1]NIAAA/NIH, Bethesda, United States

395 Neural substrates underlying the influence of affective states on intertemporal decision making
Hyo-Eun Kim[1], Mi-Sook Park[1], Ji- Eun Park[1], Jin-Hun Sohn[1]
[1]Chungnam National University, Daejeon, Korea, Republic of

396 Is payoff necessarily weighted by the probability when making risky choice? Evidence from ICA
Yuan Zhou[1], Lilin Rao[1], Tianzi Jiang[2], Shu Li[1]
[1]Institute of Psychology, Chinese Academy of Sciences, Beijing, China, [2]Institute Of Automation, Chinese Academy Of Sciences, Beijing, China

397 Computational mechanisms of stimulus-stimulus and stimulus-reward associative learning
Sandra Iglesias[1], Christoph Mathys[1,2], Kay Brodersen[1,3], Klaas Stephan[1,4]
[1]Laboratory for Social and Neural Systems Research, Dept. of Economics, University of Zurich, Switzerland, [2]Institute for Biomedical Engineering, ETH Zurich, Switzerland, [3]Department of Computer Science, ETH Zurich, Switzerland, [4]Wellcome Trust Centre for Neuroimaging, University College London, United Kingdom

398 Functional Neuroimaging of Brand Attractiveness
Aniko Sztrokay[1], Evgeny Gutyrchik[2], Ernst Poeppel[3], Thomas Meindl[4], Maximilian Reiser[5]
[1]Institute of Clinical Radiology University Hospitals Munich, Ludwig-Maximilians-University, Munich, Germany, [2]IMP / HWZ, Munich, Germany, [3]Human Science Center, Munich, Germany, [4]University Munich, Munich, Germany, [5]Institute of Clinical Radiology, University Hospitals Munich, Munich, Germany

399 Integration of disconfirmatory evidence is associated with increased activity in ventromedial PFC
Katie Lavigne[1], Todd Woodward[2]
[1]University of British Columbia, [2]University of British Columbia, Vancouver, Canada

400 The outcome evaluation in the altruistic punishment-an ERP study
Yan Wu[1], Tianzi Jiang[2]
[1]University of Electronic Science and Technology of China, Chengdu, China, [2]Institute Of Automation, Chinese Academy Of Sciences, Beijing, China

401 Neural correlates of attitudinal evaluation: A fMRI study of attitudes towards animals
Carlos Torres[1], Erick Pasaye[1], Luis Concha[1], Fernando Barrios[1]
[1]Universidad Nacional Autonoma de Mexico, QUERETARO, QRO

402 The Neurophysiology of Tactile Decision Making
Sabrina Thiel[1], Till Nierhaus[1], Arno Villringer[1], Burkhard Pleger[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

HIgher Cognitive Functions

Reasoning and Problem Solving

403 Neurodevelopmental Origins of Math Anxiety
Christina Young[1], Vinod Menon[2], Sarah Wu[2]
[1]Stanford University, Stanford, USA, [2]Stanford University, Stanford, CA

404 The role of verbal and spatial processes in deductive reasoning
Jérôme Prado[1], Rachna Mutreja[2], James Booth[1]
[1]Northwestern University, Evanston, United States, [2]Northwestern University, Evanston, IL

405 Functional Connectivity between Parietal and Prefrontal Brain Regions and Intelligence in Children
Sandra Langeslag[1], Marcus Schmidt[1], Akhgar Ghassabian[1], Frank Verhulst[1], Henning Tiemeier[1], Tonya White[1]
[1]Department of Child and Adolescent Psychiatry, Erasmus MC - Sophia, Rotterdam, The Netherlands

406 Fine-tuning of representational similarity during problem solving is related to task performance
Sarit Ashkenazi[1], Miriam Rosenberg-Lee[2], Vinod Menon[3]
[1]Stanford University School of Medicine, [2]Stanford University School of Medicine, Palo Alto, CA, [3]Stanford University, Stanford, United States

407 Planning of action with everyday objects is represented in bilateral human frontoparietal cortex
Arianne Johnson[1], Scott Grafton[1]
[1]University of California, Santa Barbara, Santa Barbara, CA

408 The Influence of Verbalization on the Pattern of Cortical Activation during Mental Arithmetic
Sabrina Koch[1], Verena Braunstein[1], Karl Koschutnig[2], Gernot Reishofer[2], Franz Ebner[2], Christa Neuper[1], Anja Ischebeck[1]
[1]Karl-Franzens University, Department of Psychology, Graz, Austria, [2]Medical University, Department of Radiology, Graz, Austria

409 The "Honest" Brain Region
Zhi Yang[1], Zirui Huang[1], Xuchu Weng[2]
[1]Institute of Psychology, Chinese Academy of Sciences, Beijing, China, [2]Hangzhou Normal University, Hangzhou, 0

410 Neural basis of Sudoku: A functional MRI study
Mauro Perrucci[1,2], Marcella Brunetti[1,2], Antonio Ferretti[1,2], Annapaola Prestia[3,4,5], Cosimo Del Gratta[1,2], Gian Luca Romani[1,2], Giovanni Frisoni[3,4,5]
[1]Department of Neuroscience and Imaging, G. D'Annunzio University, Chieti, Italy, [2]Institute for Advanced Biomedical Technology, G. D'Annunzio University Foundation, Chieti, Italy, [3]Laboratory of Epidemiology Neuroimaging and Telemedicine, IRCCS Centro San Giovanni di Dio FBF, Brescia, Italy, [4]IRCCS Centro San Giovanni di Dio FBF, Brescia, Italy, [5]The National Centre for Research and Care of Alzheimer's and Mental Diseases, Brescia, Italy

411 Using Functional Neuro-imaging as a Measurement of Clinical Reasoning Expertise
Steven Durning[1], Anthony Artino[1], Thomas Beckman[2], Vincent Capaldi[3], Eric Holmboe[1], Hai Pan[4], Louis Pangaro[1], Robert Walter[3], John Graner[1], Terry Oakes[1], Gerard Riedy[5]
[1]Uniformed Services University, Bethesda, MD, [2]Mayo Clinic, Rochester, United States, [3]Walter Reed Army Medical Center, District of Columbia, United States, [4]USU, Bethesda, United States, [5]Walter Reed Army Medical Center, Washington, DC

HIgher Cognitive Functions

Space, Time and Number Coding

412 Heterogeneous Hippocampal Response and Connectivity Associated with Children's Math Fact Retrieval
Soohyun Cho[1], Arron Metcalfe[1], Christina Young[1], Leeza Kondos[1], David Geary[2], Vinod Menon[1]
[1]Stanford University, Stanford, United States, [2]University of Missouri, Columbia, United States

413 Parietal brain activation during number processing predicts children's arithmetic achievement
Stephanie Bugden[1], Gavin Price[1], Adam McLean[1], Daniel Ansari[1]
[1]University of Western Ontario, London, Canada

414 Why do we lose track of time with age? A fNIRS study of age-related differences in timing with breaks
Paule Ellefsen-Gauthier[1], Laurence Desjardins-Crépeau[2], Claudette Fortin[1], Michèle Desjardins[3], Frédéric Lesage[3], Louis Bherer[2]
[1]Université Laval, Québec, Canada, [2]Université du Québec à Montréal, Montréal, Canada, [3]École Polytechnique, Montréal, Canada

415 Maturation of Fronto-Parietal Connectivity Underlying Math Problem Solving
Miriam Rosenberg-Lee[1], Caitlin Tenison[1], Vinod Menon[1]
[1]Stanford University, Stanford, United States

416 Cerebral correlates of non-symbolic numerical magnitude processing: the role of surface area
Stephan Vogel[1], Gavin Price[1], Justin Halberda[2], Ryan Ly[2], Daniel Ansari[1]
[1]University of Western Ontario, London, Canada, [2]Johns Hopkins University, Baltimore, United States

417 Production or prediction of time intervals: neuroanatomical dissociation with fMRI
Karen Davranche[1], Bruno Nazarian[2], Franck Vidal[1], Jennifer Coull[1]
[1]Universite de Provence & CNRS, Marseille, France, [2]La Timone Hospital, Marseille, France

418 The Sound of Symbols: Audiovisual Integration in Hindu-Arabic Numerals in the Brain
Ian Holloway[1], Leo Blomert[2], Daniel Ansari[1]
[1]University of Western Ontario, London, Ontario, [2]Maastricht University, Maastricht, Netherlands

419 Timing of posterior parahippocampal gyrus reveals multiple scene processing stages
Julien Bastin[1], Giorgia Committeri[2], Philippe Kahane[1], Gaspare Galati[3], Lorella Minotti[1], Jean-Philippe Lachaux[4], Alain Berthoz[5]
[1]INSERM U836, Grenoble institute of neurosciences and université Joseph Fourier, Grenoble, France, [2]Department of Neuroscience and Imaging, University G. D'Annunzio and ITAB, Foundation G. D'Annunzio, Chieti, Italy, [3]Department of Psychology, Sapienza University, and Foundation Santa Lucia, Rome, Italy, [4]INSERM U821, Lyon, France, [5]UMR 7152, CNRS-Collège de France, Laboratoire de Physiologie de la Perception et de l'Action, Paris, France

420 Frontal vs. Parietal Contributions to Elementary School Children's Number Concepts
Edward Hubbard[1], Bruce McCandliss[1]
[1]Vanderbilt University, Nashville, TN, USA

421 Greater complex visuo-perceptual skills correlate with smaller cortical recruitment in young adults
Sabrina Danti[1], Helen Beuzeron-Mangina[2], Constantine Mangina[2], Pietro Pietrini[3,4], Emiliano Ricciardi[3,4,5]
[1]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, Pisa, Italy, [2]Cognitive Psychophysiology Laboratory, Montreal Research and Treatment Center for Learning Abilities, Montreal, Quebec, [3]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [4]Department of Laboratory Medicine and Molecular Diagnostics, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy, [5]MRI Laboratory, Fondazione Regione Toscana/CNR "G.Monasterio", Pisa, Italy

422 The relationship between spatial memory performance and resting state functional connectivity
Jinsick Park[1], Hyeongrae Lee[1], Jeonghun Ku[2], Kang Jun Yoon[3], In Young Kim[1], Sun I. Kim[1]
[1]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [2]Keimung University, Daeku, Korea, Republic of, [3]St. Peter's Hospital, Seoul, Korea, Republic of

423 An optical illusion to assess the balance of spatial attention
Claire Gane[1], Julien Voisin[2]
[1]CIRRIS, U Laval, Québec, Canada, [2]CIRRIS, Dt Réadaptation, U Laval, Québec, Canada

Imaging Methods

EEG

424 Resolving volume conduction artefacts in reconstruction of coherent neural networks from EEG
Mark Drakesmith[1], Wael El-Deredy[1], Stephen Welbourne[1]
[1]University of Manchester, Manchester, United Kingdom

425 Development of A Miniaturized, Mobile and Wireless 16-Channel EEG System
Chin-Teng Lin[1], Wan-Ru Wang[1], I-Jan Wang[1], Lun-De Liao[1], Sheng-Fu Chen[2], Kevin C. Tseng[3], Li-Wei Ko[1]
[1]National Chiao Tung University, Hsinchu, Taiwan, Republic of China, [2]National Health Research Institutes, Miaoli, Taiwan, Republic of China, [3]Chang Gung University, Tao Yuan, Taiwan, Republic of China

426 Coincident Visual Retinotopy in simultaneous Evoked Potentials and fMRI
Hugo Sandoval[1], Joy Geng[2], Louis Irwin[3], Andrew Sands[4], Stephen Sands[4], Cameron Carter[5]
[1]Texas Tech University Health Science Center, El Paso, TX, [2]UC Davis, Davis, CA, [3]UTEP, El Paso, TX, [4]Sands Research, El Paso, TX, [5]Department of Psychiatry and Behavioral, Sacramento, United States

427 A Bayesian Time-Varying Source Reconstruction Model for EEG/MEG
Ivan Olier[1], Nelson Trujillo-Barreto[2], Wael El-Deredy[1]
[1]University of Manchester, Manchester, United Kingdom, [2]Cuban Neurosciences Center, Havana, Cuba

428 Cross-frequency Phase Synchronization during Oddball Task in Restless Legs Syndrome Patients
Jeong Woo Choi[1], Ki-Young Jung[2], Gwan-taek Lee[2], Deokwon Ko[2], Kyung Hwan Kim[1]
[1]Yonsei University, Department of Biomedical Engineering, Wonju, Korea, Republic of, [2]Korea University, Department of Neurology, Seoul, Korea, Republic of

429 Sex-linked Dissociation in Perception of vocal and non-vocal tones
Yenju Feng[1], An-Yi Hung[2], Yawei Cheng[3]
[1]National Yang-Ming University, Institude Of Neuroscience, Taiwan- Republic Of China, [2]Institute Of Neuroscience, Taipei, Taiwan- Republic Of China, [3]NYMU, Tapei, Taiwan, Republic of China

430 Discrimination of Positive and Negative Emotional Prosody in Newborns: an ERP Study
Hsin-Yu Chen[1], Shin-Yi Lee[2], Yawei Cheng[3]
[1]Institute of Neuroscience, National Yang-Ming University, Taipei, Taiwan, Republic of China, [2]Institue Of Brain Science, National Yang-Ming University, Taipei, Taiwan, Republic Of China, [3]Institute of Neuroscience, National Yang-Ming University, Tapei, Taiwan, Republic of China

431 Common Spatial Patterns Analysis for Detecting Motor Imagery in Disorders of Consciousness
Srivas Chennu[1], Damian Cruse[2,3], Camille Chatelle[4], Steven Laureys[5], Adrian Owen[2]
[1]Department of Clinical Neurosciences, University of Cambridge, Cambridge, United Kingdom, [2]Centre for Brain and Mind, University of Western Ontario, London, Canada, [3]Cognition and Brain Sciences Unit, Medical Research Council, Cambridge, United Kingdom, [4]Coma Science Group, Cyclotron Research Centre, University of Liège, Liège, Belgium, [5]Coma Science Group, Cyclotron Research Centre, University of Liège and University Hospital of Liège, Liège, Belgium

432 Investigation of Frequency Discrimination using Mismatch Negativity and Hilbert-spectram Transfom
Ayasa Matsuda[1], Keiko Hara[1], Satsuki Watanabe[2], Miho Miyajima[2], Katsuya Ohta[2], Taketoshi Maehara[3], Eisuke Matsushima[2], Masato Matsuura[4]
[1]Graduate school of Health Care Science, Tokyo Medical and Dental university, Tokyo, Japan, [2]Section of Liaison and Palliative Medicene, Tokyo Medical and Dental University, Tokyo, Japan, [3]Tokyo Medical and Dental University, Tokyo, Japan, [4]Department of Bioinformatics, Tokyo Medical and Dental University, Tokyo, Japan

433 Single-trial olfactory event-related potential extraction by using empirical mode decomposition
Chi-Hsun Wu[1,2], Chia-Yen Yang[3], Yi-Ling Chen[4], Po-Lei Lee[*,1,2,5]
[1]Department of Electrical Engineering, National Central University, Taiwan (R.O.C), [2]Department of Medical Research and Education, Taipei General Veterans Hospital, Taiwan (R.O.C), [3]Department of Biomedical Engineering, Ming-Chuan University, Taiwan (R.O.C), [4]Institute of biotechnology, National Ilan University, Taiwan (R.O.C), [5]Institute of Brain Science, National Yang-Ming University, Taiwan (R.O.C)

434 EEG Microstate Analysis of Epileptiform Discharges in Patients with Absence Seizures
Cauchy Pradhan[1], Juliane Britz[2], Christoph Michel[3], Dimitri Van De Ville[4]
[1]MIPLab,Ecole Polytechnique Fédérale de Lausanne, University of Geneva, Geneva, Switzerland, [2]Functional Brain Mapping Laboratory, Dept. of Fundamental Neurosciences, University of Geneva, Geneva, Switzerland, [3]University Hospital, Geneva, Switzerland, [4]Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

435 Localization of synchronous cortical sources from electromagnetic recordings
Younes Zerouali[1,2], Christophe Herry[1,2], Jean-Marc Lina[1]
[1]Ecole de technologie supérieure (ETS) de l'université du Québec, Montreal, Quebec, [2]Riviere-des-Prairies hospital, Montreal, Quebec

436 Semantic and perceptual decision making during propofol sedation: A high density EEG study
Ram Adapa[1], Tristan Bekinschtein[2], Anthony Absalom[3], Adrian Owen[4], David Menon[1]
[1]University of Cambridge, Cambridge, United Kingdom, [2]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom, [3]Univeristy Medical Center, Groningen, Netherlands, [4]Cognition and Brain Sciences Unit, Cambridge, United Kingdom

437 Time-frequency analysis of auditory P300 using Hilbert-Huang transform
Satsuki Watanabe[1], Keiko Hara[1], Ayasa Matsuda[1], Miho Miyajima[1], Takashi Tomita[2], Katsuya Ohta[3], Taketoshi Maehara[1], Minoru Hara[4], Masato Matsuura[1], Eisuke Matsushima[1]
[1]Tokyo Medical and Dental University, Tokyo, Japan, [2]Sony Corporation, Tokyo, Japan, [3]Onda dai-ni Hospital, Tokyo Medical and Dental University, Tokyo, Japan, [4]Hara Clinic, Yokohama, Japan

438 Mismatch negativity in a patient with frontal neglect measured with EEG
Martin Dietz[1], Joergen Feldbaek[2], Andreas Roepstorff[3], Mikkel Wallentin[4]
[1]CFIN, Aarhus University, Aarhus, Denmark, [2]Hammel Neurocentre, Aarhus University Hospital, Aarhus, Denmark, [3]Aarhus University, Aarhus C, Denmark, [4]Aarhus C, Denmark

439 Visual Oddball ERPs to Affective Words in Chinese-English Bilinguals
Zhiru Jia[1], George Alexopoulos[1], Nancy Squires[2]
[1]Weill Cornell Medical College of Cornell University, White Plains, NY USA, [2]Stony Brook University, Stony Brook, NY USA

440 High Resolution EEG spectral maps elicited by observing real faces of political candidates
Giovanni Vecchiato[1,2], Jlenia Toppi[3], Febo Cincotti[2], Laura Astolfi[3,2], Fabrizio De Vico Fallani[1,2], Michele Reino[2], Donatella Mattia[2], Gaetano Scarano[3], Fabio Babiloni[1,2]
[1]Department of Physiology and Pharmacology, University Sapienza, Rome, Italy, [2]IRCCS Fondazione Santa Lucia, Rome, Italy, [3]Department of Computer Science and Systems, University Sapienza, Rome, Italy

441 Real time feature extraction of EEG-based P300 using nonlinear principal component analysis
Arjon Turnip[1], Keum-Shik Hong[2], Myung Yung Jeong[1]
[1]Pusan National University, Pusan, Korea, Republic of, [2]Pusan National University, Busan, Korea, Republic of

442 Fast end precise 256 electrode positions using 3T MRI
Laurent Spinelli[1], Denis Brunet[2], Frederic Grouiller[2], Melanie Genetti[2], Serge Vulliemoz[1], Goran Lantz[2], Margitta Seeck[1], Christoph Michel[2]
[1]Neurology Dept, University Hospital, Geneva, Switzerland, [2]Functional Brain Mapping UNIGE/HUG Geneva, Geneva, Switzerland

443 Hilbert Spectral Analysis of Mismatch Negativity in response to vowel-speech changes
Keiko Hara[1,2], Takashi Tomita[3], Ayasa Matsuda[1], Satsuki Watanabe[4], Katsuya Ohta[5,1,4], Miho Miyajima[4], Taketoshi Maehara[6], Eisuke Matsushima[4], Minoru Hara[2], Masato Matsuura[1]
[1]Graduate School of Health Care Science, Tokyo Medical and Dental University, Tokyo, Japan, [2]Hara Clinic, Yokohama, Japan, [3]Sony Corporation Life Science Laboratory, Tokyo, Japan, [4]Section of Liaison and Palliative Medicene, Tokyo Medical and Dental University, Tokyo, Japan, [5]Onda-daini Hospital, Matsudo, Japan, [6]Department of Neurosurgery, Tokyo Medical and Dental University, Tokyo, Japan

444 Temporal and frequency information of different brain waves during Quran listening
Faruque Reza[1], Hazim Omar[2], Alwani Ahmed[2], Tahamina Begum[1], Jafri Malin Abdullah[3], Muzaimi Mustapha[4]
[1]Department of Neurosciences, University Science Malaysia, Kubang Kerian, Kota Bharu, Kelantan, [2]Department of Neurosciences, Hospital University Science Malaysia, Kubang Kerian, Kota Bharu, Kelantan, [3]Department of Neurosciences, Universiti Sains Malaysia, Kubang Kerian, Kota Bharu, Kelantan, Malaysia, [4]Department of Neurosciences, University Science Malaysia, kota bharu, Kelantan

Imaging Methods

MEG

445 ** M/EEG Source Localization with Sparse Time-Frequency Priors in Source Space**
Alexandre Gramfort[1,2], Daniel Strohmeier[3], Matti Hamalainen[4], Jens Haueisen[3], Matthieu Kowalski[5]
[1]INRIA Parietal Team - CEA Neurospin, France, [2]Department of Radiology, Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Harvard Medical School, Boston, MA, [3]Institute of Biomedical Engineering and Informatics, Technical University Ilmenau, Ilmenau, Germany, [4]Department of Radiology, Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Har, Boston, MA, [5]Laboratoire des Signaux et Systèmes (L2S), Univ. Paris-Sud, Orsay, France

446 ** Listening to rhythmic sound modulates coherence of neuromagnetic sensorimotor beta oscillation**
Bernhard Ross[1,2], Takako Fujioka[3]
[1]University of Toronto, [2]University of Toronto, Toronto, ON, Canada, [3]Rotman Research Institute, Baycrest, U of Toronto

447 ** The Default Mode Network is a core for MEG power correlation with other networks in the beta band**
Francesco de Pasquale[1,2], Stefania Della Penna[1,2], Abraham Snyder[3], Laura Marzetti[1,4], Vittorio Pizzella[5,1], Gian Luca Romani[2], Maurizio Corbetta[6]
[1]ITAB, Chieti University, Chieti, Italy, [2]Department of Neuroscience and Imaging, "G. D'Annunzio" University, Chieti, Italy, [3]Washington University School of Medicine, St. Louis, United States, [4]Department of Neuroscience and Imaging, "G. D'Annunzio" University, Chieti, Ital, Chieti, Italy, [5]ITAB, Chieti UNiversity, Chieti, Italy, [6]Washington University School of Medicine

448 ** Localization of oscillatory MEG activity combing time-frequency analysis and entropic inference**
Jean-Marc Lina[1,2], Etienne Lemay[1], Rasheda Chowdhury[3], Jeffery Hall[4], Eliane kobayashi[5], Christophe Grova[6]
[1]Ecole de Technologie Superieure, Montreal, Canada, [2]Centre de Recherche Mathématique, Montreal, Canada, [3]McGill University, Montreal, Canada, [4]Montreal Neurological Institute, Montreal, Quebec, [5]Montreal Neurological Institute, Montreal, Canada, [6]Biomedical Engineering Department, McGill University, Montreal, Canada

449 Effect of the fontanel on MEG and EEG source analysis using a finite element model of an infant head
Seok Lew[1], Matti Hämäläinen[1], Carsten Wolters[2], Danielle Sliva[3], Myong-sun Choe[3], Patricia Grant[3], Yoshio Okada[3]
[1]Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, [2]Institute for Biomagnetism and Biosignalanalysis, University of Muenster, Muenster, Germany, [3]Fetal-Neonatal Neuroimaging & Developmental Science Center, Children's Hospital Boston, Boston, MA

450 MEG Beamforming using Bayesian PCA for Adaptive Data Covariance Matrix Regularisation
Mark Woolrich[1], Laurence Hunt[2], Adrian Groves[2], Gareth Barnes[3]
[1]University of Oxford, [2]University of Oxford, Oxford, United Kingdom, [3]University College London, London, United Kingdom

451 Spatial relationship between MEG evoked responses and of rhythmic activity in a picture naming task
Hannu Mikael Laaksonen[1], Jan Kujala[1], Annika Hulten[1], Mia Liljeström[1], Riitta Salmelin[1]
[1]Brain Research Unit, Low Temperature Laboratory, Aalto University, Espoo, Finland

452 Tracking Neurological Maturation of Growth-Restricted Fetuses: A MEG Study
Hari Eswaran[1], Rathinaswamy Govindan[1], Naim Haddad[1], Curtis Lowery[1], Hubert Preissl[1], Eric Siegel[1]
[1]University of Arkansas for Medical Sciences, Little Rock, AR

453 How stable are the spectral powers and functional connectivity networks of MEG in resting states?
Seung-Hyun Jin[1], Jaeho Seol[1], June Sic Kim[1], Chun Kee Chung[1]
[1]MEG center, Seoul National University Hospital, Seoul, Republic of Korea

454 Perception of Biological motion: an MEG study
Anastasia Pavlidou[1], Joachim Lange[1], Marc Lussanet[2,3], Markus Lappe[2], Alfons Schnitzler[1]
[1]Institute of Clinical Neuroscience and Medical Psychology, Heinrich-Heine-University, Düsseldorf, Germany, [2]Department of Psychology, University of Münster, Münster, Germany, [3]Otto Creutzfeldt Center for Cognitive and Behavioral Neuroscience, Münster, Germany

455 Localization of coherence between STN and cortex in patients with Parkinson's disease
Jan Hirschmann[1,2], Tolga Özkurt[1,2], Markus Butz[1,2], Melanie Homburger[1,2], Saskia Elben[1,2], Christian Hartmann[1,2], Jan Vesper[3], Lars Wojtecki[1,2], Alfons Schnitzler[1]
[1]Institute of Clinical Neuroscience and Medical Psychology,Heinrich-Heine-University, Düsseldorf, Germany, [2]Department of Neurology, University Hospital Düsseldorf, Düsseldorf, Germany, [3]Department of Functional Neurosurgery and Stereotaxy, University Hospital Düsseldorf, Düsseldorf, Germany

456 Spatiotemporal decomposition of neuromagnetic source space: A tool for analyzing brain networks
Paul Ferrari[1], Douglas Cheyne[1]
[1]Program in Neurosciences and Mental Health, Hospital For Sick Children Research Institute, Toronto, ON

457 Hemispherical Dysfunction of Motor System in Childhood Migraine: A Magnetoencephalography Study
Jing Xiang[1], xinyao guo[2], Yingying Wang[3], John O'Brien O'Brien[4], Marielle Kabbouche[1], Scott Powers[5], Andrew Hershey[6]
[1]Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [2]Cincinnati Children's Hospital Medical Center, [3]University of Cincinnati, West Chester, United States, [4]Institute for Ageing and Health. Newcastle University, Newcastle upon Tyne, United Kingdom, [5]Cincinnati Childfren's Hospital Medical Center, Cincinnati, OH, [6]Cincinnati Children's Hospital Medical Center, Cincinnati, OH

458 What Makes Us Mishear Timbre? Failure of Perception or Error in Cognition: An MEG Study
Jaeho Seol[1,2], MiAe Oh[3], Seung-Hyun Jin[2], June Sic Kim[2], Chun Kee Chung[4,1,2]
[1]Interdisciplinary Program in Cognitive Science, Seoul National University College of Humanities, Seoul, Korea, Republic of, [2]MEG Center, Department of Neurosurgery, Seoul National University Hospital, Seoul, Korea, Republic of, [3]Department of Statistics, Seoul National University College of Natural Sciences, Seoul, Korea, Republic of, [4]Department of Neurosurgery, Seoul National University College of Medicine, Seoul, Korea, Republic of

459 Stimulus Variability Affects the Amplitude of the Auditory Steady-State Response
M Simpson[1], W Woods[2], G Prendergast[1], S Johnson[1]
[1]York Neuroimaging Centre, University of York, York, United Kingdom, [2]Faculty of Life & Social Science, Swinburne University of Technology, Melbourne, Australia

460 Developmental Impairment of Motor Function in Childhood Migraine: A Magnetoencephalography Study
xinyao guo[1], Jing Xiang[1], Yingying Wang[2], Hope O'Brien[1], Marielle Kabbouche[1], Scott Powers[1], Andrew Hershey[1]
[1]Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [2]University of Cincinnati, West Chester, United States

461 Evoked stimulations induce Epileptiform Discharges during Magnetoencephalographic (MEG) study
Tahamina Begum[1], Faruque Reza[1], Hazim Omar[2], Alwani Ahmed[2], Shalini Bhaskar[1], John Tharakan KJ[1], Jafri Abdullah[1]
[1]Department of Neurosciences, School of Medical Sciences, University Science Malaysia, 16150, Kubang Kerian, Kota Bharu, Kelantan, Malaysia, [2]Department of Neurosciences, School of Medical Sciences, Hospital University Science Malaysia, 16150, Kubang Kerian, Kota Bharu, Kelantan, Malaysia

Imaging Methods

MR Spectroscopy

462 Area-specific GABA concentration predicts tactile discrimination performance in humans
Nicolaas Puts[1,2], John Evans[3,2], Richard Edden[4,5], Francis McGlone[6], David McGonigle[1,2,7]
[1]School of Biosciences, Cardiff University, Cardiff, United Kingdom, [2]School of Psychology, Cardiff University, Cardiff, United Kingdom, [3]Cardiff University Brain Research Imaging Centre, Cardiff, United Kingdom, [4]Russell H Morgan. Johns Hopkins University, School of Medicine, Baltimore, United States, [5]FM Kirby Center for Functional Brain Imaging, Kennedy Krieger Institute, Baltimore, United States, [6]University of Liverpool, Liverpool, United Kingdom, [7]Cardiff University Brain Research and Imaging Centre, Cardiff, United Kingdom

463 Decreased Motor Cortex GABA in Children with ADHD Using Magnetic Resonance Spectroscopy
Lindsey MacNeil[1], Deana Crocetti[1], Richard Edden[2], Donald Gilbert[3], Stewart Mostofsky[4]
[1]Kennedy Krieger Institute, Baltimore, MD, [2]The Johns Hopkins University, Baltimore, MD, [3]Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [4]Kennedy Krieger Institute, Johns Hopkins, Baltimore, MD

464 Metabolism-BOLD-interaction in cortical regions of task-positive, task-negative and salience network
Coraline Metzger[1], Dorothea Horn[1], Johann Steiner[2], Constanze Seidenbecher[3], Joern Kaufmann[4], Bernhard Bogerts[2], Martin Walter[1]
[1]Clinical Affective Neuroimaging Laboatory, Department of Psychiatry, Otto-von-Guericke University, Magdeburg, Germany, [2]Department of Psychiatry, Otto-von-Guericke University, Magdeburg, Germany, [3]Leibniz Institute for Neurobiology, Magdeburg, Germany, [4]Department of Neurology, Otto-von-Guericke University, Magdeburg, Germany

465 Resting Brain Metabolite Concentrations Correlate with BOLD Response to Visual Stimulation in Human
Shaolin Yang[1,2], Hong Gu[2], Yihong Yang[2]
[1]Departments of Psychiatry and Radiology, University of Illinois at Chicago, Chicago, United States, [2]Neuroimaging Research Branch, National Institute on Drug Abuse, National Institutes of Health, Baltimore, United States

466 Chronic Widespread Pain and Chronic Localized Pain: Are There any Differences in the Neurochemical Profiles of These Conditions?
Aygul Khusnullina[1], Jeremy Jones[1], Paul Mullins[1]
[1]Bangor University, Bangor, Gwynedd

467 In vivo study of metabolite in healthy human brain
Zhiyong Yang[1,2], Qiang Yue[3], Hong Quan[2], Wenting Ren[3], Ting Cao[2], Qiyong Gong[3]
[1]Huaxi MR Research Center, Department of Radiology, West China Hospital of Sichuan University, Chengdu,China, [2]Laboratory of Medical Physics, Physics and Technology School, Wuhan University, Wuhan, China, [3]Huaxi MR Research Center, Department of Radiology, West China Hospital of Sichuan University, Chengdu, China

Imaging Methods

Multi-Modal Imaging

468 Cerebral Perfusion Imaging with C-arm Flat Detector Computed Tomography
MUDASSAR KAMRAN[1], Patrick Schweder[2], Yu Deuerling-zheng[3], James Byrne[1]
[1]University of Oxford, Oxford Neurovascular and Neuroradiology Research Unit, Oxford, United Kingdom, [2]University Of Oxford, Department Of Neurosurgery, Oxford, United Kingdom, [3]Siemens AG Healthcare, Forchheim, Germany

469 Late Effects of High-dose Chemotherapy on Brain Structure and Function in Breast Cancer Survivors
Michiel de Ruiter[1,2], Liesbeth Reneman[2], Willem Boogerd[3], Dick Veltman[4], Matthan Caan[2], Gwenaelle Douaud[5], Cristina Lavini[2], Sabine Linn[6], Epie Boven[7], Frits van Dam[1], Sanne Schagen[1]
[1]Dept of Psychosocial Research and Epidemiology, Netherlands Cancer Institute, Amsterdam, Netherlands, [2]Dept of Radiology, Academic Medical Centre, University of Amsterdam, Amsterdam, Netherlands, [3]Dept of Neuro-oncology, Netherlands Cancer Institute, Amsterdam, Netherlands, [4]Dept of Psychiatry, VU University Medical Centre, Amsterdam, Netherlands, [5]FMRIB centre, Dept of Clinical Neurology, University of Oxford, Oxford, United Kingdom, [6]Dept of Medical Oncology, Netherlands Cancer Institute, Amsterdam, Netherlands, [7]Dept of Medical Oncology, VU University Medical Centre, Amsterdam, Netherlands

470 Inter-Subject Correlations between Working Memory Task and Fractional Volume of Gray Matter
Qihong Zou[1,2], Wanyong Shin[1,3], Hong Gu[1], Xiujuan Geng[1], Wang Zhan[4], Yufeng Zang[2], Yihong Yang[1]
[1]Neuroimaging Research Branch, National Institute on Drug Abuse, National Institutes of Health, Baltimore, MD, [2]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, [3]Imaging institute, Cleveland Clinic, Cleveland, OH, [4]Center of Imaging for Neurodegenerative Diseases, University of California San Francisco, San Francisco, CA

471 Magnetic Resonance Elastography and Diffusion Tensor Imaging of the Human Brain at 3T
Uta Sboto-Frankenstein[1], Peter Latta[1], Marco Gruwel[1], Patricia Gervai[1], Boguslaw Tomanek[1]
[1]National Research Council Canada, Institute for Biodiagnostics, Winnipeg, Manitoba

472 Gray matter covariance is associated with functional integration in the adult brain
Nicolas Crossley[1], Andrea Mechelli[2], Philip McGuire[3]
[1]Institute of Psychiatry - King's College London, [2]Institute of Psychiatry King's College London, London, United Kingdom, [3]King's College London, Institute of Psychiatry, London, United Kingdom

473 Frequency-specific functional connectivity during resting state revealed by fMRI and NIRS
Shuntaro Sasai[1], Fumitaka Homae[2], Hama Watanabe[1], Akihiro Sasaki[3], Hiroki Tanabe[3], Norihiro Sadato[3], Gentaro Taga[1]
[1]University of Tokyo, Tokyo, Japan, [2]Tokyo Metropolitan University, Tokyo, Japan, [3]National Institute For Physiological Sciences, Okazaki, Aichi, Japan

474 Validation of basal ganglia segmentation on a 3T MRI template
claire haegelen[1], D. Louis Collins[2], Pierrick Coupe[3], Nicolas Guizard[4], Pierre Jannin[5], Florent Lalys[5], Xavier Morandi[5]
[1]Brain Imaging Centre, Montreal Neurological Institute, Montreal, [2]McConnell Brain Imaging Centre, Montreal Neurological Institute, Montreal, Canada, [3]McConnell Brain Imaging Centre, Montreal, Canada, [4]McConnel Brain Imaging Centre, Montreal Neurological Institute, Montreal, Canada, [5]Unit/Project VisAGeS U746, INRIA/ CNRS, UMR 6074, IRISA, Université Rennes I, Rennes, France

475 EEG-fMRI based information theoretic characterization of the human perceptual decision system
Dirk Ostwald[1], Camillo Porcaro[2], Stephen Mayhew[3], Andrew Bagshaw[3]
[1]Bernstein Centre for Computational Neuroscience, Charite, Berlin, Germany, [2]Institute of Neuroscience, Newcastle University, Newcastle upon Tyne, United Kingdom, [3]University of Birmingham, Birmingham, United Kingdom

476 Partitioning of physiological signals in the brain using concurrent near-infrared spectroscopy/fMRI
Yunjie Tong[1], Blaise Frederick[1]
[1]Brain Imaging Center, Mclean Hospital, Belmont, MA

477 Single subject resting state networks and correlated EEG power spectra
Matthias Meyer[1], Erik van Oort[1], Markus Barth[2]
[1]Radboud University Nijmegen, Donders Institute For Brain, Cognition And Behaviou, Nijmegen, Netherlands, [2]Donders Insitute for Brain, Cognition and Behaviour, Nijmegen, Netherlands

478 Simultaneous EEG/fMRI Analysis of Steady-State Visual Evoked Responses
Esin Karahan[1], Müge Özker[1], Ali Bayram[1,2], Zübeyir Bayraktaroğlu[3], Basri Erdoğan[1], Itır Kaşıkçı[4], Cengizhan Öztürk[1], Ahmet Ademoğlu[1], Tamer Demiralp[3]
[1]Bogazici University, Institute of Biomedical Engineering, Istanbul, Turkey, [2]NPIstanbul - Neuropsychiatry Hospital, Istanbul, Turkey, [3]Istanbul University, Istanbul Faculty of Medicine, Department of Physiology, Istanbul, Turkey, [4]Istanbul University, Institute of Experimental Medicine, Istanbul, Turkey

479 Activity in visual RSNs predicts the magnitude of simultaneous BOLD and EEG visual responses
Stephen Mayhew[1], Camillo Porcaro[2], Dirk Ostwald[3], Andrew Bagshaw[1]
[1]Birmingham University Imaging Centre (BUIC), School of Psychology, University of Birmingham, Birmingham, United Kingdom, [2]Institute of Neuroscience, Newcastle University, Medical School, Newcastle upon Tyne, NE2 4HH, UK, Newcastle, United Kingdom, [3]Department of Neurology and Bernstein Centre for Computational Neuroscience, Charite, Berlin, Germany

480 Perfusion Mapping of the Human Orbitofrontal Cortex using C-arm FDCT and MR-PWI
MUDASSAR KAMRAN[1], Patrick Schweder[2], Yu Deuerling-zheng[3], James Byrne[1]
[1]University of Oxford, Oxford Neurovascular and Neuroradiology Research Unit, Oxford, United Kingdom, [2]University Of Oxford, Department Of Neurosurgery, Oxford, United Kingdom, [3]Siemens AG Healthcare, Forchheim, Germany

481 Thalamic and Cortical Substrates of Large-Scale Neuronal Oscillations Assessed with EEG-fMRI
Zhongming Liu[1], Jacco de Zwart[1], Peter van Gelderen[1], Li-Wei Kuo[1], Jeff Duyn[1]
[1]Advanced MRI Section, Laboratory of Functional and Molecular Imaging, National Institutes of Health, Bethesda, Maryland, United States

482 Relationship between Anatomical Asymmetry and Functional Interhemispheric Connectivity
Jun Sung Park[1], Jung-Ho Cha[2], Uicheul Yoon[2], Sang Won Seo[3], Sun I. Kim[2], Duk L. Na[3], Jong-Min Lee[2]
[1]Department of Biomedical Engineering, Hanyang University, Seoul, South Korea, [2]Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, [3]Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of

483 Functional MRI and Transcranial Doppler sensitivity to neural activity
Stefano Peca[1], Daniela Flück[2,3], Cheryl McCreary[4,5,6], Marc Poulin[3,6], Eric Smith[4,5,6], Bradley Goodyear[1,4,5,6,7]
[1]Seaman Family MR Research Centre, University of Calgary, Calgary, Canada, [2]Institute of Human Movement Sciences and Sport, ETH Zurich, Zurich, Switzerland, [3]Department of Physiology & Pharmacology, University of Calgary, Calgary, Canada, [4]Department of Radiology, University of Calgary, Calgary, Canada, [5]Department of Clinical Neurosciences, University of Calgary, Calgary, Canada, [6]Hotchkiss Brain Institute, University of Calgary, Calgary, Canada, [7]Department of Psychiatry, University of Calgary, Calgary, Canada

484 Identification of primary motor area during isometric contraction with simultaneous EEG-EMG-fMRI
Camillo Porcaro[1,2], Stephen Mayhew[2], Dirk Ostwald[3], Leo Tomasevic[4], Franca Tecchio[4], Andrew Bagshaw[2]
[1]Institute of Neuroscience, Newcastle University, Medical School, Newcastle upon Tyne, NE2 4HH, UK, Newcastle, United Kingdom, [2]University of Birmingham, Birmingham, United Kingdom, [3]Bernstein Centre for Computational Neuroscience, Berlin, Germany, [4]ISTC-CNR, Ospedale Fatebenefratelli, Rome, Italy

485 Using EEG metrics to predict BOLD fMRI data in epilepsy
Marco Leite[1], Alberto Leal[2], Patrícia Figueiredo[1]
[1]Institute for Systems and Robotics / Instituto Superior Técnico, Lisbon, Portugal, [2]Hospital Júlio de Matos, Lisbon, Portugal

486 Face-specific neural processing revealed by concurrent EEG-fMRI
Vinh Nguyen[1], Ross Cunnington[1]
[1]Queensland Brain Institute, University of Queensland, St Lucia, Australia

487 Asymmetry of dACC: A Study of Multiple Modalities of MRI
Jue Wang[1], Dongqiang Liu[1], Weixuan Zhu[2], Zhangye Dong[2], Yufeng Zang[1,2]
[1]Center for Human Brain Research and Affiliated Hospital, Hangzhou Normal University, Hangzhou, China, [2]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

488 Application of Partial Directed Coherence to the analysis of resting-state EEG-fMRI
Claudinei Eduardo Biazoli Junior[1], João Sato[2,1], Marcio Sturzbecher[3], Draulio De Araujo[4], Edson Amaro[1]
[1]NIF/LIM44 School of Medicine, University of São Paulo, São Paulo, Brazil, [2]Center of Mathematics Computation and Cognition, Universidade Federal do ABC, Santo André, Brazil, [3]FFCLRP, University of São Paulo, Ribeirão Preto/SP, Brazil, [4]INN-ELS, Universidade Federal do Rio Grande do Norte, Natal/RN, Brazil

489 Natural variation in mu response to MNS predicts BOLD in ipsilateral S1 and dorsal attention network
Stephen Mayhew[1], Karen Julia Mullinger[2], Andrew Bagshaw[1], Richard Bowtell[2], Susan Francis[2]
[1]Birmingham University Imaging Centre (BUIC), School of Physiology, University of Birmingham, Birmingham, United Kingdom, [2]Sir Peter Mansfield Magnetic Resonance Centre, University of Nottingham, Nottingham, United Kingdom

490 Physiological noise reduction in BOLD data using optimally delayed simultaneously acquired NIRS data
Blaise Frederick[1], Yunjie Tong[1]
[1]McLean Hospital, Belmont, United States

491 Joint Inversion of brain electrodynamics and the BOLD signal in EEG-fMRI
Kevin Brown[1], Ryan Kasper[1], Barry Giesbrecht[1], Scott Grafton[1], Jean Carlson[1]
[1]UC Santa Barbara, Santa Barbara, CA, United States

492 Anatomical consistency of functional segregation in subcortical structures
caroline malherbe[1,2], Arnaud Messé[1,2], Mélanie Pélégrini-Issac[1,2], Yulia Worbe[3], Stéphane Lehéricy[4,2], Habib Benali[1,2,5]
[1]INSERM / UPMC Univ. Paris 06, UMR_S678, LIF, Paris, France, [2]IFR 49, Gif-sur-Yvette, France, [3]INSERM CIC 9503, Hopital Pitié Salpêtrière, Paris, France, [4]Centre de NeuroImagerie de Recherche – CENIR, CRICM, UPMC-Inserm U975, CNRS 7225, Paris, France, [5]Université de Montréal, MIC/UNF, Montréal, Canada

493 Correlations between resting FDG PET and fMRI of emotion in healthy and depressed adults
Wessyl Kelly[1], Eric Nofzinger[1], Howard Aizenstein[1], Mindy Heher[1], Amanda Collier[1], Jeffrey James[1], Julie Price[1], Susan Berman[1], Edward Friedman[1], Greg Siegle[1]
[1]University of Pittsburgh, School of Medicine, Pittsburgh, PA

494 EEG-fMRI effects during working memory in children and adults
Lars Michels[1], Rafael Lüchinger[2], Thomas Koenig[3], Ernst Martin[4], Daniel Brandeis[2]
[1]MR-Center University Children's Hospita, Zurich, Switzerland, [2]Department of Child and Adolescent Psychiatry, University of Zurich, Zurich, Switzerland, [3]Department of Psychiatric Neurophysiology, University Hospital of Psychiatry, Bern, Switzerland, [4]MR-Center, University Children's Hospital, Zurich, Switzerland

495 Offline TMS-fMRI shows serial processing of observed hand-object interactions between STS and PMv
Carola Arfeller[1], Jens Schwarzbach[1], Paolo Ferrari[1], Luigi Cattaneo[1]
[1]Center for Mind/Brain Sciences (CIMeC), University of Trento, Trento, Italy

496 Multimodal Canonical Correlation Analysis with Regularization
Bradley Klingenberg[1], Jonathan Taylor[2], Duygu Tosun[3], Norbert Schuff[4], Michael Weiner[5]
[1]Stanford, [2]Stanford University, Stanford, CA, [3]UC San Francisco, [4]UC San Francisco, San Francisco, CA, [5]UC San Francisco, Department of Veterans Affairs Medical Center, San Fransisco, CA

497 Structure and function in a language based decision-making task
Jeffrey Duda[1], Corey McMillan[2], Murray Grossman[2], James Gee[2]
[1]University of Pennsylvania, [2]University of Pennsylvania, Philadelphia, PA

498 Simultaneous EEG-fMRI synchronization using EPI and Spiral sequences
Ana Beatriz Solana[1], Juan Antonio Hernández-Tamames[1,2,3], Roberto García-Alvárez[4], Ceferino Maestu[1], Juan Álvarez-Linera[1,3,5], Francisco del Pozo[1]
[1]Center for Biomedical Technology - UPM, Pozuelo de Alarcon, Spain, [2]Universidad Rey Juan Carlos, Mostoles, Spain, [3]Fundación CIEN-Fundación Reina Sofía, Madrid, Spain, [4]GE Healthcare, Madrid, Spain, [5]Hospital Ruber Internacional, Madrid,Spain

499 Investigation on Negative BOLD Response Using Simultaneously Recording of fMRI and EEG
Chia-Wei Li[1], Jyh-Horng Chen[1,2]
[1]Interdisciplinary MRI/MRS Lab, Department of Electrical Engineering, National Taiwan University, Taipei, Taiwan, Republic of China, [2]Neurobiology and Cognitive Science Center, National Taiwan University, Taipei, Taiwan, Republic of China

Imaging Methods

Optical Imaging/NIRS

500 ** Time-resolved measurements of cerebral hemoglobin concentrations during a modified Stroop task**
Paul-Olivier Leclerc[1], Said Mekary[2], Laurence Desjardins-Crépeau[2], Claudine Gauthier[1], Louis Bherer[2], Richard Hoge[1]
[1]CRIUGM, University of Montreal, Montreal, Canada, [2]CRIUGM, UQAM, Montreal, Canada

501 The physiological origin of task-evoked artifacts in functional Near Infrared Spectroscopy
Evgeniya Kirilina[1], Alexander Jelzow[2], Angela Heine[1], Michael Niessing[1], Arthur Jacobs[3,1], Heidrun Wabnitz[2], Rainer Macdonald[2], Ruediger Bruehl[2], Bernd Ittermann[2], Ilias Tachtsidis[4]
[1]Free University of Berlin, Berlin, Germany, [2]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [3]Dahlem Institute of Neuroimaging of Emotion, Berlin, Germany, [4]University Collge London, London, United Kingdom

502 Sensitivity Analysis for Activation Detection in fNIRS Using P-value Corrected t- and F- statistics
Hua Li[1], Jong Chul Ye[1], Sungho Tak[1]
[1]Dept. of Bio and Brain Engineering, KAIST, Daejeon, Korea, Republic of

503 Accuracy of NIRS to Measure Baseline Optical Absorption in the Brain from Neonates to Adults
Mathieu Dehaes[1], Patricia Grant[1], Danielle Sliva[2], Nadege Roche-Labarbe[3], Rudolph Pienaar[1], David Boas[3], Maria Angela Franceschini[3], Juliette Selb[3]
[1]Division of Newborn Medicine, Children's Hospital Boston and Harvard Medical School, Boston, MA 02115, USA, [2]Fetal-Neonatal Neuroimaging & Developmental Science Center, Children's Hospital Boston, Boston, MA 02115, USA, [3]Athinoula A. Martinos Center for Biomedical Imaging and Harvard Medical School, Charlestown, MA 02129, USA

504 Anatomical Vasculature Modeling for Functional Near-Infrared Spectroscopy
Katherine Perdue[1], Solomon Diamond[1]
[1]Thayer School of Engineering at Dartmouth, Hanover, NH

505 Continuous correction of differential pathlength factor in near-infrared spectroscopy
Tanveer Talukdar[1], Solomon Diamond[2]
[1]Thayer School of Engineering at Dartmouth, Hanover, NH, Hanover, NH, USA, [2]Thayer School of Engineering at Dartmouth, Hanover, NH, USA

506 ESTIMATION OF HEMODYNAMIC RESPONSES TO EPILEPTIC ACTIVITY USING EEG/NIRS ACQUISITIONS
Alexis Machado[1], Dominique S. Rosenberg[2], Jean-Marc Lina[3], Eliane kobayashi[2], Christophe Grova[4,5]
[1]Biomedical Engineering Department, McGill University, Montreal, Quebec, [2]Montreal Neurological Institute, Department of Neurology and Neurosurgery, McGill University, Montreal, Quebec, [3]Ecole de technologie supérieure (ETS) de l'université du Québec, Montreal, Quebec, [4]Biomedical Engineering Department, McGill University, Montreal, Canada, [5]Montreal Neurological Institute, Department of Neurology and Neurosurgery, McGill University, Montreal, Canada

507 The early emergence of the cortical "social brain" in human newborns
Teresa Farroni[1], Antonio Chiarelli[2], Dino Faraguna[3], Sarah Lloyd-Fox[4], Arcangelo Merla[5], Gian Luca Romani[6], Mark Johnson[7]
[1]Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università di Padova, Padova, Italy, [2]Infrared Imaging Lab.ITAB -Institute of Advanced Biomedical Technologies and Dept. of Neuroscience a, Chieti, Italy, [3]Dipartimento di Pediatria, Ospedale di Monfalcone, Monfalcone, Italy, [4]Centre for Brain and Cognitive Development, London, United Kingdom, [5]Department of Neuroscience and Imaging - University of Chieti-Pescara, [6]ITAB- Department of Neuroscience - G.D'Annunzio University Of Chieti, Chieti, Italy, [7]Centre for Brain and Cognitive Development, Birkbeck College, London, United Kingdom

508 IMPACT OF NEONATAL INTRAVENTRICULAR HEMORRHAGE ON CORTICAL AUDITORY HEMODYNAMIC RESPONSE
Mahdi Mahmoudzadeh[1], Ghislaine Dehaene-Lambertz[2], Sabrina Goudjil[3], Reinhard Grebe[4], Guy Kongolo[1], Fabrice Wallois[5]
[1]GRAMFC EA 4293, UPJV, CHU Amiens, Amiens, France, [2]INSERM-CEA Cognitive Neuroimaging Unit, GIF/YVETTE, France, [3]GRAMFC EA4293, UPJV, CHU Amiens, Amiens, France, [4]GRAMFC, EA4293, UPJV, CHU Amiens, Amiens, France, [5]GRAMFC EA 4293

509 Feature extracting design matrix by modeling the hemodynamic behavior of a brain as an LTI System
Muhammad Aqil[1], Keum-Shik Hong[1], Myung-Yung Jeong[1]
[1]Department of Cogno-Mechatronics Engineering, Pusan National University, Busan, Korea, Republic of

510 Decoding vigilance from NIRS-data. NIRS for BCI applications?
Carsten Bogler[1,2], Jan Mehnert[2,3], Jens Steinbrink[3,4], John-Dylan Haynes[1,2]
[1]Berstein Center for Computational Neuroscience Berlin and Charité, Berlin, Germany, [2]Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]Berlin NeuroImaging Center, Charité University Medicine, Berlin, Germany, [4]Center for Stroke Research, Charité University Medicine, Berlin, Germany

511 An Experimental Platform for Dynamic Causal Modeling-Based Analysis of Functional Neuroimaging Data
Randall Barbour[1], Harry Graber[1], Christoph Schmitz[2], Yong Xu[1]
[1]SUNY Downstate Medical Center, Brooklyn, NY, [2]Charité Univeritatsmedizin, Berlin, Germany

512 Extraction of spinal cord hemodynamic response with DOI during evoked activity in cats
Alexandre Goguin[1], Serge Rossignol[2], Hugues Leblond[2], Frédéric Lesage[3], Mélanie Pélégrini-Issac[1], Habib Benali[1]
[1]INSERM / UPMC Univ. Paris 06, UMR_S678, LIF, Paris, France, [2]GRSNC, Faculty of Medicine, Université de Montréal, Montréal, Canada, [3]École Polytechnique, Montréal, Canada

513 NIRS study of brain hemodynamic response during a stop signal task in children
Mami Nakashima[1], Koji Matsuo[1], Akiko Hashimoto[2], Masayuki Nakano[3], Yuko Fujii[2], Kazuteru Egashira[1], Takeshi Matsushige[4], Toshio Matsubara[1], Takashi Ichiyama[4], Yoshifumi Watanabe[5]
[1]Division Of Neuropsychiatry, Department Of Neuroscience, Yamaguchi University Gr, Ube, Yamaguchi, [2]Department of Neuroscience, Yamaguchi University Graduate School of Medicine, Ube, Japan, [3]Division Of Neuropsychiatry, Department Of Neuroscience, Yamaguchi University Gr, Japan, [4]Department of Pediatrics, Yamaguchi University Graduate School of Medicine, Ube, Japan, [5]Division Of Neuropsychiatry, Department Of Neuroscience, Yamaguchi University G, Ube, Yamaguchi

514 A near-infrared imaging study of task priority instructions during dual-task performances in aging
Sarah Fraser[1,2], Maude Laguë-Beauvais[1,2], Laurence Desjardins-Crépeau[1,2], Nathalie Castonguay[1,2], Michèle Desjardins[3], Frédéric Lesage[3], Louis Bherer[1,2]
[1]Université du Québec à Montréal, Montréal, Canada, [2]Institut universitaire de gériatrie de Montréal, Montréal, Canada, [3]École Polytechnique, Montréal, Canada

515 Hemodynamic response to auditory stimuli demonstrates a cross-over pathway: a fNIRS study
Olivia Florea[1], Mélanie Lefrançois[1], Julie Tremblay[2], Phetsamone Vannasing[2], Franco Lepore[1], Maryse Lassonde[1]
[1]Université de Montréal, Montréal, Canada, [2]Hôpital Sainte-Justine, Montréal, Canada

516 Systemic Physiological Interference Removal in fNIRS using Multisource-detector Configuration
Le Hoa Nguyen[1], Keum-Shik Hong[1]
[1]Pusan National University, Busan, Korea, Republic of

517 Kalman filter estimator for multi-distance Diffuse Optical Imaging
Louis Gagnon[1], Katherine Perdue[2], Douglas Greve[3], Daniel Goldenholz[3], Gayatri Kaskhedikar[3], David Boas[1]
[1]Martinos Center for Biomedical Imaging, MGH & Harvard-MIT Division of Health Sciences and Technology, Charlestown, MA, USA, [2]Martinos Center for Biomedical Imaging, MGH & Dartmouth College, Charlestown, MA, USA, [3]Martinos Center for Biomedical Imaging, MGH, Charlestown, MA, USA

518 Pre-ictal changes in humans with temporal lobe epilepsy measured with near-infrared spectroscopy
Ted Slone[1,2], Harinder Dhaliwal[2], Erica Westwood[1,2], Jeff Dunn[1,2], Paolo Federico[1,2,3]
[1]Hotchkiss Brain Institute, University of Calgary, Calgary, Canada, [2]Seaman Family MR Centre, Calgary, Canada, [3]Department of Clinical Neurosciences, University of Calgary, Calgary, Canada

519 Monitoring attentional state using functional near infrared spectroscopy: A pilot study
Angela Harrivel[1], Tristan Hearn[1], Joshua Carp[2], Daniel Weissman[2], Scott Peltier[3]
[1]NASA Glenn Research Center, Cleveland, OH, [2]Department of Psychology, University of Michigan, Ann Arbor, MI, [3]Department of Biomedical Engineering, University of Michigan, Ann Arbor, MI

520 Activity in Extrastriate Body Area measured by NIRS and 3D-digitizer
Yoshimasa Takigawa[1], Shimada Sotaro[2]
[1]Meiji university, Japan, [2]Meiji University, Kawasaki, Japan

521 The role of the prefrontal cortex (PFC) in naïve complex motor skills learning: an fNIRS study
David James[1], Darren Patten[1], Daniel Leff[1], Felipe Orihuela-Espina[1], Thanos Athanasiou[1], Ara Darzi[1], Guang-Zhong Yang[1]
[1]Imperial College, London, United Kingdom

522 Monitoring of cerebral oxygen metabolism and blood volume during nasal and oral breathing using NIRS
Masahiro Sano[1], Sayaka Sano[1], Noriyuki Oka[2], Kayoko Yoshino[3,2], Toshinori Kato[4]
[1]Medical Corporation Chitokukai, Family Dental Clinic, Tokyo, Japan, [2]KATOBRAIN Co., Ltd., Tokyo, Japan, [3]Graduate school of Media and Governance, Keio University, kanagawa, Japan, [4]KATOBRAIN CO.,LTD., Tokyo, Japan

523 Neuroergonomic assessment of collaborative gaze control for robotic surgery: an fNIRS study
David James[1], Daniel Leff[1], Loi-Wah Sun[1], Felipe Orihuela-Espina[1], Ka-Wai Kwok[1], George Mylonas[1], Thanos Athanasiou[1], Ara Darzi[1], Guang-Zhong Yang[1]
[1]Imperial College, London, United Kingdom

524 Near-Infrared Spectroscopy (NIRS) BCI to control FES of the upper limb towards stroke rehabilitation
Markus Schürholz[1], Mohit Rana[1], Woosang Cho[1], Martin Rohm[2], Rüdiger Rupp[2], Cuntai Guan[3], Chun Yu Tse[4], Yun Ying Huang[5], Niels Birbaumer[6], Trevor Penney[5], Ranganatha Sitaram[1]
[1]Institut für Medizinische Psychologie und Verhaltensneurobiologie, Tübingen, Germany, [2]Klinik für Paraplegiologie, Heidelberg, Germany, [3]Institute for Infocomm Research, Singapore, Singapore, [4]Cognitive Science Programme, Temasek Laboratories, National University of Singapore, Singapore, Singapore, [5]Department of Psychology, National University of Singapore, Singapore, Singapore, [6]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany

525 Model Independent Functional Optical Imaging using Principal Component Analysis
Jana Kainerstorfer[1], Andrei Medvedev[2], Franck Amyot[1], Jason Riley[1], Eric Wassermann[3], Paul Smith[1], Amir Gandjbakhche[1], Laleh Najafizadeh[1]
[1]National Institutes of Health, Bethesda, MD, [2]Georgetown University, Washington, DC, [3]Brain Stimulation Unit, National Institute of Neurological Disorders and Stroke, Bethesda, MD

526 Changing pattern search component during probability learning: a study using fNIR neuroimaging
Didem Gokcay[1], Murat Cakir[1], Filiz Gozenman[1], Burcu Arslan[1], Mustafa Ciftcioglu[1], Kemal Taskin[1], Hasan Ayaz[2]
[1]METU Informatics Institute, Ankara, Turkey, [2]Drexel University, Philadelphia, United States

527 Wavelet packet entropy based brain activation mapping by near infrared spectroscopy
Xiao-Su Hu[1], Keum-Shik Hong[2], Shuzhi Ge[3]
[1]Department of Cogno-Mechatronics Engineering, Pusan National University, Busan, Korea, Republic of, [2]Pusan National University, Busan, Korea, Republic of, [3]Department of Electrical and Computer Engineering, The National University of, Singapore, Singapore

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528 Functional hybrid imaging for neuromuscular oxygen dynamics using NIRS of two dimensional vector
Toshinori Kato[1], Noriyuki Oka[1], Kayoko Yoshino[1,2]
[1]KATOBRAIN Co., Ltd., Tokyo, Japan, [2]Graduate school of Media and Governance, Keio University, Kanagawa, Japan

529 Influence of the Superior Sagittal Sinus on SMA in fNIRS
Satoru Kohno[1], Akihiro Ishikawa[1], Takashi Amita[1], Yoshinori Masuda[1], Haruhide Udagawa[1], Yoshihiro Inoue[1]
[1]Shimadzu Corporation, Kyoto, Japan

530 Influence of heart rate and stress on cortical haemodynamics: a longitudinal fNIRS study
David James[1], Daniel Leff[1], Felipe Orihuela-Espina[1], Ka-Wai Kwok[1], George Mylonas[1], Sunir Gohil[1], Thanos Athanasiou[1], Ara Darzi[1], Guang-Zhong Yang[1]
[1]Imperial College, London, United Kingdom

531 Characteristics of Brain Activity Data during Mathematical Tasks of Varying Difficulty Levels
Naoko Okamoto[1], Yasufumi Kuroda[2]
[1]Kyoto University, Kyoto, Japan, [2]Bukkyo University, Kyoto, Japan

532 An fNIRS study of the influence of the timing of commercials on children: compared to that of adults
Misa Sawai[1], Atsushi Matsumoto[2], Eriko Aiba[2], Noriko Nagata[2]
[1]Kwansei Gakuin Univercity, Sanda, Japan, [2]Kwansei Gakuin University, Sanda, Japan

Imaging Methods

PET

533 ** **Imaging Dopamine Neurotransmission During Response Selection and Inhibition**
Rajendra Badgaiyan[1]
[1]University at Buffalo, Buffalo, NY

534 ** **Serotonin Transporter Genetic Variants Predict Rostral Anterior Cingulate Dopamine Synthesis**
James Zhang[1], Daniel Eisenberg[1], Joseph Masdeu[1], Philip Kohn[1], Czarapata Jasmin[1], Bhaskar Kolachana[1], Daniel Weinberger[1], Karen Berman[1]
[1]National Institutes of Health, Bethesda, United States

535 Estrogen and progesterone treatment affects serotonergic neurotransmission in postmenopausal women
Georg Kranz[1], Ulrike Kaufmann[2], Johanna Ungersböck[3], Andreas Hahn[1], Patrycja Stein[1], Pia Baldinger[1], Anna Höflich[1], Sylwia Zgud[1], Christoph Kraus[1], Jan Losak[1], Markus Mitterhauser[3], Wolfgang Wadsak[3], Siegfried Kasper[1], Rupert Lanzenberger[1]
[1]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria, [2]Department of Obstetrics and Gynecology, Medical University of Vienna, Vienna, Austria, [3]Department of Nuclear Medicine, Medical University of Vienna, Vienna, Austria

536 DTI guided analysis of D3 receptor distribution and function in man with [11C]-(+)-PHNO PET
Andri Tziortzi[1], Graham Searle[2], Christopher Long[2], Saad Jbabdi[1], Paul Shotbolt[2], Timothy Behrens[1], Eugenii Rabiner[2], Roger Gunn[2], Mark Jenkinson[1]
[1]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [2]CIC, GlaxoSmithKline, London, United Kingdom

537 Machine learning identifies sex-specific differences in cerebral serotonin transporter binding
Jan Kalbitzer[1], Andre Marquand[2], Felix Bermpohl[1], Michael Smolka[3], Andrea Kobiella[3], Michael Brammer[2], Matthias Reimold[4], Andreas Heinz[1]
[1]Department of Psychiatry and Psychotherapy, Charité - University Medicine, Berlin, Germany, [2]Brain Image Analysis Unit, Centre for Neuroimaging Sciences, Institute of Psychiatry, KCL, London, United Kingdom, [3]Technische Universität Dresden, Dresden, Germany, [4]Department of Nuclear Medicine, University of Tübingen, Tuebingen, Germany

Modeling and Analysis Methods

Bayesian Modeling

538 ** **Inferring the Individual Nature of Bayesian Learning under Multiple Forms of Uncertainty**
Christoph Mathys[1], Jean Daunizeau[2], Kay Brodersen[3], Sandra Iglesias[4], Karl Friston[5], Klaas Enno Stephan[2]
[1]University of Zurich, Zürich, Switzerland, [2]University of Zurich, Zurich, Switzerland, [3]ETH Zurich, Zurich, Switzerland, [4]University of Zurich, [5]Wellcome Trust Centre for Neuroimaging, UCL, Lodnon, United Kingdom

539 Free-Energy Minimization and the Mismatch Negativity: Simulations based on Generalised Filtering
Falk Lieder[1,2], Jean Daunizeau[3,4], Marta Garrido[5], Klaas Enno Stephan[3,4], Karl Friston[4]
[1]Lab. for Soc. and Neural Systems Res., Inst. for Emp. Research in Economics, University of Zurich, Zurich, Switzerland, [2]Institute for Neuroinformatics, ETH, Zurich, Switzerland, [3]Laboratory for Social and Neural Systems Research, IEW, UZH, Zurich, Switzerland, [4]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom, [5]Wellcome Trust Centre for Neuroimaging, London, United Kingdom

540 Bayesian Gaussian Processes for Coordinate-based Meta-analysis of Neuroimaging Reports
Gholamreza Salimi-Khorshidi[1], Stephen Smith[1], Thomas Nichols[2], Mark Woolrich[3]
[1]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [2]University of Warwick, Dept. of Statistics, Coventry, United Kingdom, [3]University of Oxford

541 BSMac: A MATLAB toolbox Implementing a Bayesian Spatial Model for Brain Activation and Connectivity
Lijun Zhang[1], Sanjay Agravat[2], Gordana Derado[1], Shuo Chen[1], DuBois Bowman[1]
[1]Department of Biostatistics and Bioinformatics, Emory University, Atlanta, GA, [2]Division of Research and Health Sciences, Emory University, Atlanta, GA

542 Post-hoc model selection of dynamic causal models
Maria Joao Rosa[1], Will Penny[1], Karl Friston[1]
[1]Wellcome Trust Centre For Neuroimaging, UCL, London, United Kingdom

543 Observing the observer: deciding when to decide
Jean Daunizeau[1], Hanneke Den Ouden[2], Stefan Kiebel[3], Mathias Pessiglione[4]
[1]Laboratory for Social and Neural Systems Research, Dept. of Economics, University of Zurich, Zurich, Switzerland, [2]Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [4]Brain and Spine Institute, Hôpital Pitié-Salpêtrière, Paris, France

544 A Group Study on BOLD Change to the Steady State Visual Stimuli with Bayesian Inference
Meltem Sevgi[1], Esin Karahan[1], Ali Bayram[1], Deniz Duru[1], Cengizhan Öztürk[1], Ahmet Ademoğlu[1], Tamer Demiralp[2]
[1]Bogazici University, Institute of Biomedical Engineering, Istanbul, Turkey, [2]Istanbul University, Istanbul Faculty of Medicine, Department of Physiology, Istanbul, Turkey

Modeling and Analysis Methods

Classification and Predictive Modeling

545* Generative Embedding for Model-Based Classification of fMRI Data, (O-M4)
Kay Brodersen[1], Thomas Schofield[2], Alexander Leff[3], Cheng Soon Ong[1], Ekaterina Lomakina[1], Joachim Buhmann[1], Klaas Enno Stephan[4]
[1]ETH Zurich, Zurich, Switzerland, [2]ION, LONDON, United Kingdom, [3]University College London, London, United Kingdom, [4]University of Zurich, Zurich, Switzerland

546 ** Mixed-Effects Inference on Classification Performance in Group Studies**
Kay Brodersen[1], Justin Chumbley[2], Christoph Mathys[3], Jean Daunizeau[2], Cheng Soon Ong[1], Joachim Buhmann[1], Klaas Enno Stephan[2]
[1]ETH Zurich, Zurich, Switzerland, [2]University of Zurich, Zurich, Switzerland, [3]Zurich, Switzerland

547* Multivariate mapping of fMRI data using kernel regression with multiple predictors, (O-M4)
Giancarlo Valente[1], Gianluca Vanacore[2], Elia Formisano[1]
[1]Maastricht University, Maastricht, Netherlands, [2]University of Rome, Rome, Italy

548* Inter-subject hyperalignment of neural representational spaces in the auditory cortex., (O-M4)
J Swaroop Guntupalli[1], James Haxby[1]
[1]Dartmouth College, Hanover, NH

549* Mechanisms of hemodynamic-based decoding of information conveyed in orientation columns, (O-M4)
Zeshan Yao[1], Martin Villeneuve[1], Pascal Kropf[1], Javeed Shaikh[1], Chang'an Zhan[1], Curtis Baker[1], Amir Shmuel[1]
[1]McGill, Montreal, Canada

550 Genetics Influence Inter-subject Brain State Prediction
R. Cameron Craddock[1], Stephen LaConte[1], F. Xavier Castellanos[2,3], Xi-Nian Zuo[4], Paul Thompson[5], Greig de Zubicaray[6], Katie McMahon[7], Ian Hickie[8], Nicholas Martin[9], Margaret Wright[9], Michael Milham[2,3]
[1]Virginia Tech Carilion Research Institute, Roanoke, VA, [2]Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, [3]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY, [4]Institute of Psychology, Chinese Academy of Sciences, Beijing, China, [5]Laboratory of Neuro Imaging, UCLA School of Medicine, Los Angeles, CA, [6]School of Psychology, University of Queensland, Brisbane, Australia, [7]Centre for Advanced Imaging, University of Queensland, Brisbane, Australia, [8]Brain and Mind Research Institute, University of Sydney, Sydney, Australia, [9]Queensland Institute of Medical Research, Brisbane, Australia

551 A temporal pattern recognition approach to functional neuroimaging: validation and application
Tim Hahn[1], Andre Marquand[2], Michael Plichta[3], Ann-Christine Ehlis[4], Martin Schecklmann[5], Thomas Dresler[1], Tomasz Jarczok[6], Elisa Eirich[6], Christine Leonhard[6], Andreas Reif[6], Klaus-Peter Lesch[6], Michael Brammer[2], Janaina Mourao-Miranda[7], Andreas Fallgatter[8]
[1]Department of Psychiatry, University of Würzburg, Würzburg, Germany, [2]Brain Image Analysis Unit, Centre for Neuroimaging Sciences, Institute of Psychiatry, KCL, London, United Kingdom, [3]Department of Psychiatry, Division for Imaging in Psychiatry, Central Institute of Mental Health, Mannheim, Germany, [4]University of Tuebingen, Department of Psychiatry and Psychotherapy, Tuebingen, Germany, [5]University of Regensburg, Department of Psychiatry, Psychosomatics and Psychotherapy, Regensburg, Germany, [6]University of Wuerzburg, Department of Psychiatry, Psychosomatics and Psychotherapy, Wuerzburg, Germany, [7]King's College, London, United Kingdom, [8]University of Tuebingen, Department of Psychiatry and Psychotherapy, Wuerzburg, Germany

552 Multivariate Profiling of Drug-Induced Brain Activation in Rats
Andreas Bruns[1], Céline Risterucci[1], Basil Künnecke[1], Jean-Luc Moreau[1], Joseph Wettstein[1], Edilio Borroni[1], Eric Prinssen[1], Markus von Kienlin[1]
[1]F. Hoffmann-La Roche Ltd, CNS Research, Basel, Switzerland

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553 Discriminant maps of cortical activity for classification of affective disorders
Pin-Shiuan Lee[1], Li-Fen Chen[2,3], Yong-Sheng Chen[4], Tung-Ping Su[5,6], Jen-Chuen Hsieh[2,3]
[1]Institute of Biomedical Informatics, National Yang-Ming University, Taipei, Taiwan, Republic of China, [2]Institute of Brain Science, National Yang-Ming University, Taipei, Taiwan, Republic of China, [3]Integrated Brain Research Laboratory, Department of Medical Research and Education, Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China, [4]Department of Computer Science, National Chiao Tung University, Hsinchu, Taiwan, Republic of China, [5]Department of Psychiatry, Faculty of Medicine, National Yang-Ming University, Taipei, Taiwan, Republic of China, [6]Taipei Veterans General Hospital, Taipei, Taiwan, Republic of China

554 Comparison of methods for trial specific activation estimation
Jeanette Mumford[1], F Gregory Ashby[2], Benjamin Turner[2], Russell Poldrack[1]
[1]University of Texas at Austin, Austin, TX, [2]University of California, Santa Barbara, Santa Barbara, CA

555 Total variation regularization for fMRI-based brain activity decoding
Bertrand Thirion[1], Vincent Michel[2], Alexandre Gramfort[3], Gael Varoquaux[4], Evelyn Eger[5]
[1]INRIA Futurs, Orsay, France, [2]INRIA/Neurospin, Gif sur Yvette, France, [3]INRIA - CEA Neurospin, France, [4]Gif-sur-Yvette, France, [5]INSERM U.562, Gif/Yvette, France

556 Classification of Schizophrenia Patients Based on ERP Abnormalities during the Auditory Oddball Task
Mohammad Reza Arbabshirani[1,2], Vince Calhoun[1,2], Claudia Tesche[3]
[1]Department of ECE, University of New Mexico, Albuquerque, NM, United States, [2]The Mind Research Network, Albuquerque, NM, United States, [3]Department of Psychology, University of New Mexico, Albuquerque, United States

557 Detecting Parkinson's brain changes using local feature based regional SVM ensemble on MRI images
Chunsheng Fang[1,2], Judd Storrs[3], Anca Ralescu[2], Jing-Huei Lee[3], Jason Lu[1,2]
[1]Division of Biomedical Informatics, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [2]Dept. of Computer Science, University of Cincinnati, Cincinnati, OH, [3]Center for Imaging Research, University of Cincinnati, Cincinnati, OH

558 Data-driven search for spectral connectivity measures predictive of schizophrenia
Garth Thompson[1], Raymond Cho[2]
[1]Georgia Institute of Technology and Emory University, Atlanta, GA, [2]University of Pittsburgh, Pittsburgh, PA

559 Method for subject-specific and subject-independent classification of event-related potentials
Agustín Lage-Castellanos[1], Juan Nieto[2], Ileana Quiñones[1], Eduardo Martínez-Montes[1]
[1]Cuban Neuroscience Center, Havana, Cuba, [2]Australian Centre for Field Robotics, University of Sydney, Sidney, Australia

560 Sparse Bayesian Learning for Predicting MCI Conversion to AD and Identifying MRI Biomarkers
Li Shen[1], Yuan Qi[2], Sungeun Kim[1], Kwangsik Nho[1], Jing Wan[1], Shannon Risacher[1], Andrew Saykin[3]
[1]Indiana University School of Medicine, Indianapolis, IN, [2]Purdue University, West Lafayette, IN, [3]Indiana University School of Medicine, Indianapolis, United States

561 Backward Edge Elimination Using Graph Kernels: Analysis of Abnormal Brain Connectivity
Shahab Kadkhodaeian Bakhtiari[1], Fatemeh Mokhtari[2], Alireza Sojoudi[2], Gholam-Ali Hossein-Zadeh[2], Dorothea Horn[3], Martin Walter[3]
[1]Control & Intelligent Center of Excellence, ECE, University of Tehran, Tehran, Iran, [2]Control & Intelligent Centre of Excellence, ECE, University of Tehran, Tehran, Iran, [3]Department of Psychiatry, Otto-von-Guericke University, Magdeburg, Germany

562 Assessing (fMRI) Brain-computer interface stability in ALS with support vector machine
Robert Welsh[1], Laura Jelsone-Swain[1], Scott Peltier[1]
[1]University of Michigan, Ann Arbor, MI, United States

563 Predicting Brain Activity using a Bayesian Spatial Model
DuBois Bowman[1], Gordana Derado[1]
[1]Department of Biostatistics and Bioinformatics, Emory University, Atlanta, GA

564 A new approach to classification of MRI brain images based on penalized logistic regression
Ramon Casanova[1], Mark Espeland[2], Joseph Maldjian[3]
[1]Wake Forest University of Health Sciences, Winston Salem, NC, United States, [2]Wake Forest University School of Medicine, Winston-Salem, NC, [3]Wake Forest University School of Medicine, Winston-Salem, NC, United States

565 Reverse-Inference for Meta-Analysis: Predicting Study Type with a Fully Bayesian Spatial Model
Jian Kang[1], Timothy Johnson[1], Thomas Nichols[2], Tor Wager[3], Lisa Barrett[4]
[1]University of Michigan Biostatistics, Ann Arbor, MI, [2]University of Warwick, Dept. of Statistics, Coventry, United Kingdom, [3]University of Colorado Psychology, Boulder, CO, [4]Northeastern University Psychology & Mass General Hospital, Harvard Medical School, Boston, MA

566 A Novel Support Vector Classifier for Longitudinal Neuroimaging Data
Shuo Chen[1], DuBois Bowman[1]
[1]Department of Biostatistics and Bioinformatics, Emory University, Atlanta, GA

567 A High-Performance Software Package for Functional MR Imaging in Real-Time (TurboFIRE)
Stefan Posse[1], Elena Ackley[2], Weili Zheng[3]
[1]University of New Mexico School of Medicine, Dept. of Neurology, Albuquerque, United States, [2]University of New Mexico School of Medicine, Albuquerque, NM, [3]University of New Mexico School of Medicine, Department of Neurology, Albuquerque, NM

568 Classification of AD from MRI using Sparse Discriminant Analysis with Spatial Regularization
Ying Lee[1], Achim Gass[2], Andreas Monsch[3], Anil Rao[1]
[1]GlaxoSmithKline Clinical Imaging Centre, Hammersmith Hospital, London, United Kingdom, [2]Departments of Neurology and Neuroradiology, University Hospital, Basel, Switzerland, [3]Memory Clinic, Department of Geriatrics, University Hospital, Basel, Switzerland

569 A new kernel to introduce spatial information in SVM-based multi-voxel pattern analysis of fMRI data
Sylvain Takerkart[1], Liva Ralaivola[2], Bertrand Thirion[3]
[1]CNRS - INCM, Marseille, France, [2]Laboratoire d'Informatique Fondamentale, Aix-Marseille University, Marseille, France, [3]INRIA Futurs, Orsay, France

570 Decoding Directed Brain Activity in fMRI using Support Vector Machines and Gaussian Processes
jessica schrouff[1], Caroline Kussé[2], Pierre Maquet[2], Christophe Phillips[3], Louis Wehenkel[4]
[1]Cyclotron Research Centre, University of Liège, Belgium, [2]Cyclotron Research Centre, University of Liège, Liège, Belgium, [3]University of Liege, Sart Tilman, Liege, Belgium, [4]Giga, University of Liège, Liège, Belgium

571 Causality as a unifying approach between activation and connectivity analysis of fMRI data
Nevio Dubbini[1], Emiliano Ricciardi[1,2,3], Anna Gaglianese[1], Stefano Marmi[4], Pietro Pietrini[1,2]
[1]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [2]Department of Laboratory Medicine and Molecular Diagnostics, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy, [3]MRI Laboratory, Fondazione Regione Toscana/CNR "G.Monasterio", Pisa, Italy, [4]Scuola Normale Superiore, Pisa, Italy

572 Influences of varying scanner parameters on BrainAGE estimation
Katja Franke[1], Christian Gaser[2]
[1]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Germany, [2]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Jena, Germany

573 Prediction of Individual Brain Age in Children Using MRI
Christian Gaser[1,2], Katja Franke[1], Eileen Luders[3], Arne May[4]
[1]Structural Brain Mapping Group, Dept. of Psychiatry, University of Jena, Jena, Germany, [2]Dept. of Neurology, University of Jena, Jena, Germany, [3]UCLA, Dept. Of Neurology, Los Angeles, United States, [4]Dept. of Systems Neuroscience, Hamburg, Germany

574 Complex fMRI data classification using composite kernels: application to schizophrenia
Eduardo Castro[1], Manel Martinez-Ramon[1,2], Arvind Caprihan[3], Kent Kiehl[1,3], Vince Calhoun[1,3]
[1]University of New Mexico, Albuquerque, NM, United States, [2]Universidad Carlos III, Leganes-Madrid, Spain, [3]The Mind Research Network, Albuquerque, NM, United States

575 Prediction of the hand digits at the somatosensory cortex with fMRI high spatial resolution data
Selene Amaral[1], Nestor Caticha[2]
[1]University of Sao Paulo, Sao Paulo/Brazil, [2]University of Sao Paulo, Sao Paulo, Brazil

576 The Impact of Sample Size and Feature Selection in Classification of Alzheimer's Disease
Chia-Yueh Carlton Chu[1], Ai-Ling Hsu[2], Kun-Hsien Chou[3], John Ashburner[4], Peter Bandettini[5], Ching-Po Lin[6]
[1]National Institute of Mental Health, NIH, Washington, United States, [2]Institute of Brain Science, National Yang Ming University, Taipei, Taiwan, Republic of China, [3]National Yang Ming University, Taiwan- Republic Of China, [4]Wellcome Trust Centre for Neuroimaging, [5]NIMH/NIH, Bethesda, MD, [6]National Yang-Ming University, Taipei, Taiwan- Republic Of China

577 Cortical Feature Matching using Jensen-Shannon Divergence
Shantanu Joshi[1], Ian Bowman[1], Arthur Toga[1], John Van Horn[1]
[1]Laboratory of Neuro Imaging, UCLA, Los Angeles, United States

578 Coding of Symbolic Number Relationships in Human Prefrontal-Parietal Activity Patterns
Qiang Chen[1], Claire Kaplan[1], Daniel R. Weinberger[1], Hao Yang Tan[1]
[1]National Institute of Mental Health, National Institutes of Health, Bethesda, MD

579 Combining fMRI signal from different task components for improved prediction and insight with MVPA
Eugene Duff[1], Matthew Howard[2], Frederick Wilson[3], Stephen Smith[4], Mark Woolrich[5]
[1]FMRIB Centre, Oxford, United Kingdom, [2]Kings College, London, London, [3]Pfizer, Sandwich, Kent, [4]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [5]University of Oxford

580 Resting state functional connectivity and diagnosis: an application of one-class SVM in ADHD
Joao Sato[1], Marcelo Hoexter[2], Luis Rohde[3]
[1]Universidade Federal do ABC, Santo Andre, Brazil., [2]Universidade Federal de São Paulo, Sao Paulo, Brazil, [3]PRODAH, Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil

581 Multivariate classification of natural and urban scene viewing
Scott Peltier[1], Marc Berman[1], John Jonides[1]
[1]University of Michigan, Ann Arbor, USA

582 Search for task-relevant vs task-irrelevant brain areas using sparse regression modeling
Irina Rish[1], Guillermo Cecchi[2], Marwan Baliki[3], Vania Apkarian[4]
[1]IBM T.J. Watson Research, [2]IBM T. J. Watson Research Center, Yorktown Heights, NY, [3]Northwestern University, Chicago, United States, [4]Northwestern University, Chicago, IL

583 Selecting features based on stability to classify depressed patients in fMRI
Jane Rondina[1], Andre Marquand[1], Tim Hahn[2], John Shawe-Taylor[3], Janaina Mourao-Miranda[3]
[1]Centre for Neuroimaging Sciences, Institute of Psychiatry, Kings College, London, United Kingdom, [2]Department of Psychiatry, University of Würzburg, Würzburg, Germany, [3]University College London, London, United Kingdom

584 Mapping of spatio-temporal discriminative Information for SVM classification of fMRI data
Rainer Boegle[1,2], Carolin Cyran[3], Stefan Glasauer[1,2], Marianne Dieterich[3]
[1]Center for Sensorimotor Research, Ludwig-Maximilians University, Munich, Germany, [2]Integrated Center for Research and Treatment of Vertigo, Ludwig- Maximilians University (IFBLMU), Munich, Germany, [3]Department of Neurology, Ludwig-Maximilians-University, Munich, Germany

585 Music-induced Emotion Classification Assessed by Principal Component Analysis
Yuan-Pin Lin[1], Jeng-Ren Duann[2], Jyh-Horng Chen[1], Tzyy-Ping Jung[3]
[1]National Taiwan University, Taipei, Taiwan, Republic of China, [2]China Medical University Hospital, Taichung, Taiwan, Republic of China, [3]Institute for Neural Computation, University of California, San Diego, CA

586 Modality-indipendent Classification of Action Feature in the Human Brain
Giacomo Handjaras[1], Giulio Bernardi[1], Pietro Pietrini[1,2], Emiliano Ricciardi[1,2,3]
[1]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [2]Department of Laboratory Medicine and Molecular Diagnostics, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy, [3]MRI Laboratory, Fondazione Regione Toscana/CNR "G.Monasterio", Pisa, Italy

587 EVOLVOX: Functional brain mapping by methods of evolutionary natural selection
Mohammed Al-Rawi[1], João Paulo Silva Cunha[2]
[1]IEETA, University Of Aveiro, Portugal, [2]IEETA / DETI, University of Aveiro, Portugal, Aveiro, Portugal

588 FMRI-derived Measure of System Dysregulation Classifies Anxious/Depressed Patients from Controls
Denis Rubin[1], Tomer Fekete[1], Lilianne Mujica-Parodi[2]
[1]Stony Brook University, Stony Brook, NY, [2]State University of New York at Stony Brook, School of Medicine, Stony Brook, NY

589 Random Subspace Method for Feature Selection in fMRI Classification
Tianwen Chen[1]
[1]George Mason University, Fairfax, VA

590 Meta analysis of language data using Machine Learning
Animesh Sharma[1,2], Kenneth Hugdahl[2,3], Karsten Specht[2,4]
[1]Informatics Institute, University of Bergen, Bergen, Norway, [2]Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway, [3]Division of Psychiatry, Haukeland University Hospital, Bergen, Norway, [4]Department for Clinical Engineering,Haukeland University Hospital, Bergen, Norway

591 A strategy for characterizing the spatial distribution of information within a region of interest
Jo Etzel[1], Michael Cole[1]
[1]Washington University in St. Louis, St. Louis, MO

592 Using Design Contrasts with Multivariate Pattern Classification Analysis
Joseph Dunlop[1], Hervé Abdi[2]
[1]The University of Texas at Dallas, Richardson, TX, [2]The University of Texas at Dallas, Richardson, TX

Modeling and Analysis Methods

Diffusion MRI Modeling and Analysis

593 Enhanced localization in deterministic tractography analyses with *along*-tract statistics**
John Colby[1], Lindsay Soderberg[1], Catherine Lebel[1], Ivo Dinov[1], Paul Thompson[1], Elizabeth Sowell[1]
[1]UCLA, Los Angeles, CA

594 Selecting the number of fibers in a Multi-Fiber Model from CUbe and SPhere (CUSP) Diffusion Imaging**
Benoit Scherrer[1], Simon Warfield[1]
[1]Children's Hospital Boston and Harvard Medical School, Boston, MA

595 Influence of Image Reconstruction from Multichannel Diffusion MRI on Fibre Orientation Estimation**
Stamatios Sotiropoulos[1], Timothy Behrens[1], Jesper Andersson[1], Essa Yacoub[2], Steen Moeller[2], Saad Jbabdi[1]
[1]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [2]CMRR, University of Minnesota, Minneapolis, MN, United States

596 Can DWI-based eigenvector centrality maps improve the functional alignment of cortices?
Oliver Lyttelton[1], Pierre Bellec[2], Niall Duncan[1], Dave Hayes[1], Pengmin Qin[1], Christine Wiebking[1], Georg Northoff[1]
[1]University of Ottawa Institute of Mental Health Research, Ottawa, Canada, [2]CRIUGM, Montreal , Quebec

597 Incremental gradient table for multiple Q-shells diffusion MRI
Emmanuel Caruyer[1], Christophe Lenglet[2], Guillermo Sapiro[3], Rachid Deriche[1]
[1]INRIA Sophia Antipolis - Méditerranée, France, [2]Center for Magnetic Resonance Research, Department of Radiology, U of Minnesota Medical School, Minneapolis, MN, [3]Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN

598 Dipy - a novel software library for diffusion MR and tractography
Eleftherios Garyfallidis[1], Matthew Brett[2], Bagrat Amirbekian[3], Christopher Nguyen[4], Fang-Cheng Yeh[5], Emanuele Olivetti[6], Yaroslav Halchenko[7], Ian Nimmo-Smith[8]
[1]University of Cambridge, Cambridge, United Kingdom, [2]Univesity of California, Berkeley, Berkeley, United States, [3]University of California, San Franscisco, San Franscisco, United States, [4]University of California Los Angeles / Cedars Sinai Medical Center, Los Angeles, United States, [5]Carnegie Mellon University, Pittsburgh, United States, [6]Bruno Kessler Foundation and University of Trento, Trento, Italy, [7]Dartmouth College, Hanover, United States, [8]Medical Research Council Cognition and Brain Sciences Unit, Cambridge, United Kingdom

599 The effect of imaging resolution on the number of fiber orientations per voxel in DWI
René Besseling[1,2], Jacobus Janssen[1], Maarten Vaessen[1], Paul Hofman[1,2], Albert Aldenkamp[2,1], Walter Backes[1]
[1]Radiology, Maastricht University Medical Center, Maastricht, Netherlands, [2]Kempenhaeghe Epilepsy Center, Heeze, Netherlands

600 An easy-to-use pipeline for creating connectomes
Erik Ziegler[1], Luca Matarazzo[1], Ariane Foret[1], Elodie André[1], Pierre Maquet[1], Christophe Phillips[1]
[1]Cyclotron Research Centre, University of Liège, Liège, Belgium

Modeling and Analysis Methods

Segmentation and Parcellation

601 Connectivity-Based Whole-Brain Hierarchical Parcellation of the Human Brain
David Moreno-Dominguez[1], Alfred Anwander[1], Ralph Schurade[1], Thomas Knösche[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

Modeling and Analysis Methods

Diffusion MRI Modeling and Analysis

602 The vibration artifact in DTI: assessment and correction
Siawoosh Mohammadi[1], Zoltan Nagy[1], Oliver Josephs[1], Nikolaus Weiskopf[1]
[1]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom

603 Distribution of White Matter MS Lesions in Fiber Tracts
Navid Shiee[1], Pierre-Louis Bazin[2], Daniel Reich[1,3], Peter Calabresi[1], Dzung L. Pham[1,4]
[1]Johns Hopkins University, Baltimore, MD, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [3]National Institute of Neurological Disorders and Stroke, Bethesda, MD, [4]Center for Neuroscience and Regenerative Medicine, Bethesda, MD

604 Evaluation of registration performance with probabilistic tractography
Marius de Groot[1], Meike Vernooij[1], Stephen Smith[2], Arfan Ikram[1], Wiro Niessen[1,3], Jesper Andersson[2]
[1]Erasmus MC, Rotterdam, The Netherlands, [2]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [3]Delft University of Technology, Delft, The Netherlands

605 Regional variation models of white matter microstructure
Gemma Morgan[1], Hui Zhang[2], Brandon Whitcher[3], Daniel Alexander[2]
[1]University College London, London, UK, [2]University College London, London, United Kingdom, [3]GlaxoSmithKline, London, United Kingdom

606 Exploring gender differences in white matter using a new tract specific atlas
Caroline Brun[1], Hui Zhang[2], Paul Yushkevich[3], Daniel Rueckert[4], James Gee[5]
[1]University of Pennsylvania, [2]University College London, London, United Kingdom, [3]Penn Image Computing and Science Laboratory, Department of Radiology, University of Pennsylvania, Philadelphia, United States, [4]Imperial College London, London, United Kingdom, [5]University of Pennsylvania, Philadelphia, PA

607 Reliability of tract-based spatial statistics analysis for DTI
Yang wang[1], Andrew Saykin[1], Tom Hummer[1], William Kronenberger[1], John West[1], Vincent Mathews[1]
[1]Indiana University, Indianapolis, IN

608 Axon diameter mapping in the presence of orientation dispersion using diffusion MRI
Hui Zhang[1], Penny Hubbard[2], Geoffrey Parker[3], Daniel Alexander[1]
[1]University College London, London, United Kingdom, [2]University of Manchester, Manchester, United Kingdom, [3]Imaging Sciences and Biomedical Engineering, University of Manchester, Manchester, United Kingdom

609 Inference on Constant Solid Angle Orientation Distribution Functions from Diffusion-Weighted MRI
Stamatios Sotiropoulos[1], Iman Aganj[2], Saad Jbabdi[1], Guillermo Sapiro[2], Christophe Lenglet[3], Timothy Behrens[1]
[1]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [2]Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN, United States, [3]Center for Magnetic Resonance Research, University of Minnesota, Minneapolis, MN, United States

610 Modeling MR-based g-ratio Measurements in Demyelinating Diseases
Nikola Stikov[1,2], Bragi Sveinsson[3], Christine Tardif[1,2], Robert Dougherty[3], Bruce Pike[2]
[1]McGill University, Montreal, Canada, [2]Montreal Neurological Institute, Montreal, Canada, [3]Stanford University, Stanford, CA

611 Package dti: A Framework for HARDI-Modeling in R
Karsten Tabelow[1], Henning Voss[2], Joerg Polzehl[1]
[1]WIAS, Berlin, Germany, [2]Citigroup Biomedical Imaging Center, Weill Cornell Medical College, New York City, NY

612 Comparing Template-space and Subject-space Methods To Measure Fractional Anisotropy Changes in ALS
John Woo[1], Hui Zhang[2], Elias Melhem[1], Sumei Wang[1], Lauren Elman[1], Leo McCluskey[1], James Gee[1]
[1]University of Pennsylvania, Philadelphia, PA, [2]University College London, United Kingdom

613 Diffusion tensor imaging distortion correction with T1
Ki Sueng Choi[1], Alexandre Franco[2], Paul Holtzheimer[2], Xiaoping Hu[1], Helen Mayberg[2]
[1]Emory University/Georgia Tech, Atlanta, GA, [2]Emory University, Atlanta, GA

614 White Matter Connectivity of the Human Insula
Alan Tucholka[1], Maxime Descoteaux[2], Guillaume Gilbert[3], Jean-Maxime Leroux[3], Dang Khoa Nguyen[4], Sarah Lippe[5]
[1]University of Montreal, Department of Psychology, CHU Ste-Justine, Quebec, Canada, [2]Université de Sherbrooke, Sherbrooke, Quebec, [3]CHUM Notre-Dame, Montreal, Quebec, [4]University of Montreal, CHUM Notre-Dame, Montreal, Quebec, [5]University of Montreal, Department of Psychology, CHU Ste-Justine, Montreal, Quebec

615 Fast-Marching Tractography Suggests Altered Hippocampal Connectivity in Temporal Lobe Epilepsy
Vishal Patel[1], Cristian Coroian[1], Noriko Salamon[1], Paul Thompson[1], Arthur Toga[1]
[1]University of California, Los Angeles, Los Angeles, CA

616 Structural adaptive smoothing increases sensitivity of DTI to detect microstructure alterations
Karsten Tabelow[1], Simon Keller[2], Siawoosh Mohammadi[3], Harald Kugel[4], Jan-Simon Gerdes[2], Joerg Polzehl[1], Michael Deppe[5]
[1]WIAS, Berlin, Germany, [2]University of Münster, Department of Neurology, Münster, Germany, [3]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom, [4]Dept. of Clinical Radiology, University of Muenster, Münster, Germany, [5]University of Muenster, Munster, Germany

617 Quantitative tract-specific measures using deterministic and probabilistic diffusion tractography
Ai Wern Chung[1], Hugh Markus[1], Thomas Barrick[1]
[1]Centre for Clinical Neuroscience, St George's University of London, London, United Kingdom

618 Improving analysis of big DTI studies
Davide Laneri[1], Alexandra Hellerbach[1], Miriam Bauer[2,3], Susanne Knake[4], Andreas Jansen[1], Jens Sommer[1]
[1]Department of Psychiatry and Psychotherapy, Section of BrainImaging, University of Marburg, Marburg, Germany, [2]Department of Neurosurgery, University of Marburg, Marburg, Germany, [3]Department of Mathematics and Computer Science, Distributed Systems Group, University of Marburg, Marburg, Germany, [4]Department of Neurology, University of Marburg, Marburg, Germany

619 Diffusion MRI Data Parallel Processing Using Multi-GPU
Jungsoo Lee[1], Sun Mi Park[1], Dae-Shik Kim[1]
[1]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of

620 Higher Rank Diffusion Tensor Imaging of Brain Tumors
Subhadip Paul[1], Veer Singh Mehta[2], Prasun Roy[1]
[1]National Brain Research Centre, Manesar, India, [2]National Brain Research Centre, Government General Hospital, Gurgaon, India

621 White Matter Tractography in Fetal Alcohol Spectrum Disorders: Fractional Anisotropy & Tract Length
Lindsay Soderberg[1]
[1]UCLA, Los Angeles, CA

622 Fiber tracking methods with white matter mask and intuitive fast marching tracktography (IFMT)
Hun-Ki Kwon[1], Uicheul Yoon[1], Jun-Sung Park[1], Sun I. Kim[1], Duk L. Na[2], Jong-Min Lee[1]
[1]Department of Biomedical Engineering, Hanyang University, Seoul, South Korea, [2]Department of Neurology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea

623 Improved Voxelwise Analysis and Brain-Wide Machine Learning Using the Full Diffusion Tensor
Anne-Laure Fouque[1], Pierre Fillard[2], Anne Bargiacchi[3], Arnaud Cachia[4], Monica Zilbovicius[5], Benjamin Thyreau[6], Edith Le Floch[6], Philippe Ciuciu[6], Edouard Duchesnay[6]
[1]CEA / INSERM U1000, Saclay, France, [2]INRIA Parietal / CEA, Saclay, France, [3]INSERM-CEA U1000, Orsay, France, [4]UMR 894 INSERM - Paris Descartes University, Saint-Anne Hospital, Paris, France, [5]INSERM, Orsay, France, [6]CEA, Saclay, France

624 Dentato-Rubro-Thalamic Tract in Human Brain: Diffusion Tensor Tractography Study
YONG HYUN KWON[1], Sung-Ho Jang[2], Mi-Young Lee[3], Sang Ho Ahn[2], HYEOK GYU KWON[4], Jeong Pyo Seo[4]
[1]1Department of Physical Therapy, Yeungnam College of Science and Technology, Daegu, South Korea, [2]Department of Physical Medicine & Rehabilitation, Yeungnam University College of Medicine, Daegu, Korea, Republic of, [3]Department of Physical Therapy, College of Health and Therapy, Daegu Hanny University, Daegu, Korea, Republic of, [4]Department of Physical Therapy, Graduate School of Rehabilitation Science, Daegu University, Daegu, Korea, Republic of

Modeling and Analysis Methods

EEG/MEG Modeling and Analysis

625* **Biophysical mechanisms of multistability in resting state cortical rhythms, (O-Th2)**
Frank Freyer[1], James Roberts[2], Robert Becker[1], Peter Robinson[3], Petra Ritter[1], Michael Breakspear[2]
[1]Charite University Medicine Berlin, Berlin, Germany, [2]Queensland Institute of Medical Research, Brisbane, Australia, [3]School of Physics, University of Sydney, Sydney, Australia

626 **Improving the Nulling Beamformer with Subspace Suppression**
Kunjan Rana[1], Lucia Maria Vaina[2], Matti Hämäläinen[3]
[1]Boston University, Boston, MA, USA, [2]Boston University& Harvard Medical School, Massachusetts General Hospital, USA, [3]Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, USA

627 **FASST - a "fMRI Artefact rejection and Sleep scoring Toolbox"**
jessica schrouff[1], Yves Leclercq[1], Pierre Maquet[2], Christophe Phillips[2]
[1]Cyclotron research Centre, University of Liege, Belgium, [2]Cyclotron Research Centre, University of Liege, Belgium

628 **On non-stationarity of EEG signals during early adolescence**
Vasily Vakorin[1], Bratislav Misic[1], Olga Krakovska[2], Kristina Martinu[3], Catherine Poulsen[3], Tomas Paus[1], Anthony McIntosh[1]
[1]Rotman Research Institute, Baycrest Centre, Toronto, Canada, [2]York University, Toronto, Canada, [3]McGill University, Montreal, Canada

629 **Decoding the temporal microstructure of large-scale networks underlying task related differences**
Arpan Banerjee[1], Ajay Pillai[2], Justin Sperling[2], Jason Smith[3], Barry Horwitz[4]
[1]NIDCD/ NIH, [2]NIDCD/ NIH, Bethesda, United States, [3]NIDCD, NIH, Bethesda, MD, [4]NIDCD-NIH, Rockville, United States

630 **Intermittent spike-wave dynamics due to cortico-cortical interactions in a neural mass model**
Marc Goodfellow[1], Kaspar Schindler[2], Gerold Baier[1]
[1]University of Manchester, Manchester, United Kingdom, [2]Bern University Hospital, Bern, Switzerland

631 **Packet Departure Times in Electroencephalographic Recordings**
Bratislav Misic[1,2], Vasily Vakorin[3], Tomas Paus[3], Natasa Kovacevic[3], Anthony McIntosh[3]
[1]Rotman Research Institute - Baycrest Centre, Toronto, Canada, [2]Department of Psychology, University of Toronto, Toronto, Canada, [3]Rotman Research Institute - Baycrest Centre, Toronto, ON

632 **Performance of EEG source imaging methods on multiple correlated sources**
Thomas Jochmann[1,2,3,4], Michael Scherg[5], Julia Owen[1], David Wipf[1], Hagai Attias[6], Jens Haueisen[7], Srikantan Nagarajan[1]
[1]Biomagnetic Imaging Lab, Dept. of Radiology and Biomedical Imaging, University of California, San Francisco, CA, [2]Institute of Biomedical Engineering and Informatics, Ilmenau University of Technology, Ilmenau, Germany, [3]Medical Physics Group, Department of Diagnostic and Interventional Radiology, Jena University Hospital, Jena, Germany, [4]Invitronic GmbH, Jena, Germany, [5]BESA GmbH, Gräfelfing, Germany, [6]Golden Metallic Inc., San Francisco, CA, [7]Institute of Biomedical Engineering and Informatics, Technical University Ilmenau, Ilmenau, Germany

633 **Localizing focal sources from MEG by efficient inference in a high dimensional state-space model**
Makoto Fukushima[1,2], Okito Yamashita[1], Atsunori Kanemura[1], Shin Ishii[3,1], Mitsuo Kawato[4,2], Masa-aki Sato[1]
[1]ATR Neural Information Analysis Laboratories, Kyoto, Japan, [2]Nara Institute of Science and Technology, Nara, Japan, [3]Kyoto University, Kyoto, Japan, [4]ATR Computational Neuroscience Laboratories, Kyoto, Japan

634 **Hemodynamic correlates of P300 variability**
Gebhard Sammer[1], Helge Gebhardt[1], Philipp Reckling[1], Martin Krebber[1], Carlo Blecker[1], Matthias Bischoff[1], Bernd Gallhofer[1]
[1]University of Gießen, Giessen, Germany

635 **Assessment of nonlinear interactions in event-related potentials at short inter-stimulus intervals**
Georgios Mitsis[1], Giandomenico Iannetti[2]
[1]Department of Electrical and Computer Engineering, University Of Cyprus, Nicosia, Cyprus, [2]Department of Neuroscience, Physiology and Pharmacology, University College London, London, United Kingdom

636 **Independent Component Analysis of high-density EEG requires temporal pre-whitening filters**
German Gomez-Herrero[1,2], Ilse Verweij[1], Kalle Rutanen[3], Simon-Shlomo Poil[2], Huibert Mansvelder[2], Klaus Linkenkaer-Hansen[2], Ysbrand Van Der Werf[1], Eus J.W. Van Someren[4]
[1]Netherlands Institute for Neuroscience, Amsterdam, Netherlands, [2]Neuroscience Campus Amsterdam, VU University, Amsterdam, Netherlands, [3]Tampere University of Technology, Tampere, Finland, [4]Netherlands Institute For Neuroscience, Amsterdam, Netherlands

637 **Data-driven Connectivity Changes in Patients with Alzheimer's Disease**
Andrew Kerr[1], Kwaku Akrofi[2], Mary Baker[1]
[1]Texas Tech University, Autumn's Dawn NICE Lab, Lubbock, TX , [2]University of Illinois at Urbana-Champaign, Urbana, IL

638 **Boosting the Detection of Gamma-band Responses in Multichannel MEG Recordings**
Liisa Helle[1], Samu Taulu[1], Lauri Parkkonen[1,2]
[1]Elekta Oy, Helsinki, Finland, [2]Brain Research Unit, Low Temperature Laboratory, Aalto University School of Science, Espoo, Finland

>> Wednesday, June 29: 13:15 – 15:45 (even numbers)
>> Thursday, June 30: 10:30 – 13:00 (odd numbers)

639 General Spectral Measures to Investigate Oscillatory Interactions
Cristina Gorrostieta[1], Hernando Ombao[1]
[1]Brown University (Section of Biostatistics), Providence, RI, United States

640 A Bootstrap analysis of MEG source localization accuracy for somatosensory steady-state responses
Shahab Jamali Gharetape[1,2], Bernhard Ross[1,2]
[1]Rotman Research Institute, Baycrest, Toronto, Ontario, Canada, [2]University of Toronto, Toronto, Ontario, Canada

641 Working memory components by clustering for multiple subjects using multi-way analysis in MEG study
Heejung Kim[1,2,3], Hyekyoung Lee[1,2], Hyojin Park[1,2,3], Hyejin Kang[1,2], Chun-Kee Chung[4], Eunjoo Kang[5], Dong Soo Lee[1,2,3,6]
[1]Department of Nuclear Medicine, Seoul National University College of Medicine, Seoul, Korea, Republic of, [2]Institute of Radiation Medicine, Medical Research Center, Seoul National University, Seoul, Korea, Republic of, [3]Interdisciplinary Program in Cognitive Science, Seoul National University, Seoul, Korea, Republic of, [4]MEG Center, Department of Neurosurgery, Seoul National University Hospital, Seoul, Korea, Republic of, [5]Kangwon National University, Chuncheon, Korea, Republic of, [6]WCU Department of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science and Technology and College of Medicine or College of Pharmacy, Seoul National University, Seoul, Korea, Republic of

642 BrainWave: A beamformer toolbox for MEG
Douglas Cheyne[1,2], Natascha van Lieshout[1,3]
[1]Program in Neurosciences and Mental Health, Hospital for Sick Children Research Institute, Toronto, ON, Canada, [2]Department of Medical Imaging, University of Toronto, Toronto, ON, Canada, [3]Faculty of Engineering, University of Waterloo, Waterloo, ON, Canada

643 Characterising Neuronal Interactions by Analysis of Common Frequencies
Michel van Putten[1,2]
[1]Clinical Neurophysiology Group, MIRA, University of Twente, Enschede, Netherlands, [2]Department of Neurology and Clinical Neurophysiology, Medisch Spectrum Twente, Enschede, Netherlands

644 Statistical Analysis of Phase and Amplitude based on a Circular Complex Gaussian Model
Sergul Aydore[1], Dimitrios Pantazis[2], John Mosher[3], Richard Leahy[1]
[1]University of Southern California, Los Angeles, CA, [2]Massachusetts Institute of Technology, Cambridge, MA, [3]Cleveland Clinic, Cleveland, OH

Modeling and Analysis Methods

Diffusion MRI Modeling and Analysis

645 Atlas-Based Analysis of Structural Maturation in the Human Brain
Jan Schreiber[1], Alfred Anwander[2], Thomas Knösche[2]
[1]Max-Planck-Institute for Human Cognitive and Brain Sciences, leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

Modeling and Analysis Methods

EEG/MEG Modeling and Analysis

646 Nonlinear ICA: Applications to Spatial and Temporal EEG Source Separation
Lei Wu[1,2], Vince Calhoun[3,4]
[1]The Mind Research Network, Albuquerque, NM, USA, [2]Dept. of ECE, University of New Mexico, Albuquerque, NM, USA, [3]The Mind Research Network, Albuquerque, United States, [4]Dept. of ECE, University of New Mexico, Albuquerque, NM

647 Infant ERP amplitudes change during a test session: Implications for cognition and methodology
Manuela Stets[1], Vincent Reid[1]
[1]Department of Psychology, Durham University, Durham, United Kingdom

648 LIMO EEG: A toolbox for automated analyses of full scalp, full time MEEG data
Cyril Pernet[1], Guillaume Rousselet[2,3]
[1]Brain Imaging Research Centre, University of Edinburgh, Edinburgh, United Kingdom, [2]Centre for Cognitive Neuroimaging (CCNi), Glasgow, United Kingdom, [3]Institute of Neuroscience and Psychology, University of Glasgow, Glasgow, United Kingdom

649 Coupled neural fields: Intrinsic modulation of extrinsic coupling
Jean Daunizeau[1], Dimitris Pinotsis[2], Klaas Stephan[1], Karl Friston[3]
[1]Laboratory for Social and Neural Systems Research, Dept. of Economics, University of Zurich, Zurich, Switzerland, [2]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom, [3]Wellcome Trust Centre for Neuroimaging, UCL, Lodnon, United Kingdom

650 Single-trial extraction of beta ERS in EEG Signals Using Empirical Mode Decomposition
Po-Lei Lee[1]
[1]Department of Electrical Engineering, Taipei, Taiwan

651 Primary motor area as a direct target of somatosensory projections
Franca Tecchio[1,2], Leo Tomasevic[3,4], Carlo Salustri[5], Camillo Porcaro[6]
[1]LET'S-ISTC-CNR, Ospedale Fatebenefratelli, Isola Tiberina, 00186, Rome, Italy, [2]Department of Imaging, SAN RAFFAELE, Cassino, Italy, [3]LET'S-ISTC-CNR, Ospedale Fatebenefratelli, Rome, Italy, [4]University of Plymouth, Rome-Node, Rome, Italy, [5]LET'S-ISTC-CNR, Ospedale Fatebenefratelli, Isola Tiberina, Rome, Italy, [6]Institute of Neuroscience, Newcastle University, Medical School, Newcastle upon Tyne, United Kingdom

652 Neuronic Source Localizer: software for calculating Brain Electromagnetic Tomography
Mayelin Borrego[1], Nelson Trujillo-Barreto[2], Yanays Rodriguez-Puentes[1], Jorge Bosch-Bayard[1], Eduardo Martínez-Montes[1], Lester Melie-García[1], Eduardo Aubert[1], Pedro Valdes-Sosa[1]
[1]Cuban Neuroscience Center, Havana, Cuba, [2]Cuban Neurosciences Center, Havana, Cuba

653 Modeling spatially extended cortical activity in MEG
Douglas Cheyne[1], Jason Lerch[1], Paul Ferrari[1], Richard Wennberg[2], Ismail Mohamed[3], Hiroshi Otsubo[4]
[1]Program in Neurosciences and Mental Health, Hospital for Sick Children Research Institute, Toronto, ON, Canada, [2]Krembil Neuroscience Centre, Division of Neurology, Toronto Western Hospital, Toronto, ON, Canada, [3]Alberta Children's Hospital, Calgary, AB, Canada, [4]Division of Neurology, Hospital for Sick Children, Toronto, ON, Canada

654 Localization of Coherent Cortical Networks with Electroencephalography
Adrian Guggisberg[1], Sarang Dalal[2], Johanna Zumer[3], Sviatlana Dubovik[1], Armin Schnider[1]
[1]University Hospital Geneva, Geneva, Switzerland, [2]University of Konstanz, Konstanz, Germany, [3]University of Nottingham, Nottingham, United Kingdom

655 Empirical Mode Decomposition Phase-Locking of Magnetoencephalography Mismatch-Negativity Data
R Fonseca-Pinto[1], A Andrade[2], L Hughes[3], J Rowe[3]
[1]Polytechnic Institute of Leiria, School of Technology and Management, Leiria, Portugal, [2]IBEB-FCUL, Lisboa, Portugal, [3]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom

656 Virtually expanding the spatial coverage of intracranial EEG with source localization
Sarang Dalal[1], Juan Vidal[2], Philippe Kahane[3], Lorella Minotti[3], Olivier Bertrand[2], Karim Jerbi[2], Jean-Philippe Lachaux[2]
[1]University of Konstanz, Konstanz, Germany, [2]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Brain Dynamics and Cognition Team, Lyon, France, [3]INSERM U836 and Université Joseph Fourier, Grenoble, France

657 Category Separation of Multi-Subject EEG Data using MUBBADA
Mary Kathryn Reagor[1], Joseph Dunlop[2], James Jerger[2], Anjali Krishnan[2], Hervé Abdi[2]
[1]University of Texas at Dallas, [2]University of Texas at Dallas, Richardson, TX

658 Eye Tracking-Guided EEG Analysis
Francisco Parada[1], Thomas Busey[1], Aina Puce[1]
[1]Department of Psychological & Brain Sciences, Indiana University, Bloomington, IN. USA

659 Identifying Oscillatory Activity in Parkinson's Disease LFP and MEG Data by Adaptive Decomposition
Tolga Özkurt[1], Markus Butz[1], Alfons Schnitzler[1]
[1]Institute for Clinical Neuroscience and Medical Psychology, Heinrich-Heine University, Düsseldorf, Germany

660 Evaluation of multiple-sphere head models for MEG source localization
Marc Lalancette[1], Maher Quraan[1], Douglas Cheyne[1,2]
[1]Neurosciences & Mental Health, The Hospital for Sick Children Research Institute, Toronto, Canada, [2]Department of Medical Imaging, University of Toronto, Toronto, Canada

661 Nonlinear Canonical Correlation Analysis for coupling brain activities in two-person MEG data
Cristina Campi[1], Aapo Hyvarinen[2]
[1]Department of Computer Science, University of Helsinki, Finland, [2]University of Helsinki

662 Adjoint method for lead-fields computation in MEEG
Emmanuel Olivi[1], Alexandre Gramfort[2], Theodore Papadopoulo[1], Maureen CLERC[1]
[1]INRIA Sophia Antipolis - Méditerrannée, Sophia Antipolis, France, [2]INRIA - CEA Neurospin, Orsay, France

663 A Spatially Extended Neural Field Model for Spike-Wave Dynamics
Peter Taylor[1]
[1]University of Manchester, UK

664 ERP analyze method with Hilbert Huang Transform particularly frequency analysis
Takashi Tomita[1], Akio Yasuda[2], Satsuki Watanabe[3], Keiko Hara[4], Ayasa Matsuda[5], Miho Miyajima[3], Katsuya Ohta[3], Minoru Hara[6], Eisuke Matsushima[3], Masato Matsuura[7]
[1]Sony Corporation, Life Science Laboratory, [2]Sony Corporation Life Science Laboratory, Tokyo, Japan, [3]Section of Liaison and Palliative Medicene, Tokyo Medical and Dental University, Tokyo, Japan, [4]Tokyo Medical and Dental University, Tokyo, Japan, [5]Graduate School of Health Care Science, Tokyo Medical and Dental University, Tokyo, Japan, [6]Hara Clinic, Yokohama, Japan, [7]Department of Bioinformatics, Tokyo Medical and Dental University, Tokyo, Japan

665 Mapping human brain function: a comparison between Variational Bayes Techniques and LCMV
Paolo Belardinelli[1], Erick Ortiz[1], Gareth Barnes[2], Uta Noppeney[3], Hubert Preissl[1]
[1]MEG Center, Tuebingen, Germany, [2]University College London, London, United Kingdom, [3]Max Planck Institute, Tuebingen, Germany

Modeling and Analysis Methods

Exploratory Modeling and Artifact Removal

666* Linked ICA of multiple WM and GM measures reveals multimodal components with distinct age profiles, (O-M4)
Adrian Groves[1], Lars Westlye[2], Stephen Smith[1], Mark Woolrich[3]
[1]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [2]Center for the Study of Human Cognition, Dept. of Psychology, University of Oslo, Oslo, Norway, [3]Oxford Centre for Human Brain Activity, University of Oxford, Oxford, United Kingdom

667 Identifying the sources of the pulse artefact in EEG recordings made inside an MR scanner
Karen Julia Mullinger[1], Jade Havenhand[1], Richard Bowtell[1]
[1]University of Nottingham, Nottingham, United Kingdom

>> Wednesday, June 29: 13:15 – 15:45 (even numbers)
>> Thursday, June 30: 10:30 – 13:00 (odd numbers)

668 Artifact Removal from Vasculature Origin in fMRI Analysis using fMRI-NIRS Simultaneous Recording
Sungho Tak[1], Jong Chul Ye[1]
[1]Dept. of Bio and Brain Engineering, KAIST, Daejeon, Korea, Republic of

669 Correlated noise correction in 2D and 3D fMRI at 7 Tesla
João Jorge[1], Patrícia Figueiredo[1], Wietske van der Zwaag[2], Mayur Narsude[2], José Marques[2]
[1]Institute for Systems and Robotics / Instituto Superior Técnico, Lisbon, Portugal, [2]Laboratory for Functional and Metabolic Imaging / École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

670 Patterns of inter-subject covariance in grey matter: a Linked ICA analysis using FreeSurfer and VBM
Adrian Groves[1], Lars Westlye[2], Stephen Smith[1], Mark Woolrich[3]
[1]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [2]Center for the Study of Human Cognition, Dept. of Psychology, University of Oslo, Oslo, Norway, [3]Oxford Centre for Human Brain Activity, University of Oxford, Oxford, United Kingdom

671 Comparison of Image Distortion Correction Algorithms for MRI
Rui Lavrador[1], Liliana Caldeira[2], Filipe Janela[2], Nicolás Lori[3]
[1]Faculty of Sciences and Technology of University of Coimbra, Coimbra, Portugal, [2]Siemens S.A. Healthcare Sector, Porto, Portugal, [3]IBILI, Faculty of Medicine, University of Coimbra, Coimbra, Portugal

672 A semi-automatic method for determining electrode positions and labels from artefacts in EEG/fMRI
Jan De Munck[1], Petra van Houdt[2], Ruud Verdaasdonk[3], Pauly Ossenblok[4]
[1]Amsterdam, Netherlands, [2]Epilepsy Centre Kempenhaeghe, Heeze, Netherlands, [3]VU University Medical Center, Amsterdam, Netherlands, [4]Kempenhaeghe, Heeze, Netherlands

673 Topological Correction of Three-Dimensional Volumes Using Spherical Harmonics
Rachel Yotter[1], Robert Dahnke[2], Paul Thompson[3], Christian Gaser[1]
[1]Structural Brain Mapping Group, Department of Psychiatry, University of Jena, Jena, Germany, [2]UniversitÃ¤tsklinikum Jena, Jena, Germany, [3]Laboratory of Neuro Imaging, Dept. of Neurology, UCLA School of Medicine, Los Angeles, United States

674 Investigating the temporal dynamics of cognition, a preliminary investigation using BOLD fMRI
Jason Steffener[1], Yaakov Stern[1]
[1]Columbia University, New York, NY

675 Artefact removal algorithms for co-registered EEG/fMRI
Jan De Munck[1], Petra van Houdt[2], Ruud Verdaasdonk[3], Pauly Ossenblok[4]
[1]Amsterdam, Netherlands, [2]Epilepsy Centre Kempenhaeghe, Heeze, Netherlands, [3]VU University Medical Center, Amsterdam, Netherlands, [4]Kempenhaeghe, Heeze, Netherlands

676 A new likelihood-based simultaneous FDR and FNR control in neuroimaging
Donghwan Lee[1], Hyejin Kang[2], Eunkyung Kim[1], Youngjo Lee[1], Dong Soo Lee[3]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University College of Med, Seoul, Korea, Republic of, [3]Seoul National University College of Medicine, Seoul, Korea, Republic of

677 A Framework for Volume Rendering of FreeSurfer Segmented Brain MRI
Ørjan Bergmann[1], Cecilie Hartberg[1], Ingrid Agartz[1]
[1]University of Oslo, Oslo, Norway

Modeling and Analysis Methods

fMRI Connectivity and Network Modeling

678* Stable Clusters of Brain Regions Associated with Distinct Motor Task-Evoked Hemodynamic Responses, (O-Th2)
Pierre Orban[1], Julien Doyon[1], Richard Hoge[1], Pierre Bellec[1]
[1]Functional Neuroimaging Unit, CRIUGM, University of Montreal, Montreal, Canada

679* Impaired short-range functional connectivity in schizophrenia disrupts organization of rfMRI network, (O-T1)
Aaron Alexander-Bloch[1,2], Edward Bullmore[2,3], Petra Vertes[2], Reva Stidd[1], Liv Clasen[1], Francois Lalonde[1], Jay Giedd[1], Nitin Gogtay[1]
[1]NIMH Child Psychiatry Branch, Bethesda, MD, USA, [2]University of Cambridge Brain Mapping Unit, Cambridge, United Kingdom, [3]GlaxoSmithKline, Cambridge, United Kingdom

680* Spontaneous fluctuations in end-tidal PCO2 and apparent resting state functional connectivity, (O-Th2)
Cecile Madjar[1], Claudine J Gauthier[2,1], Pierre Bellec[1], Rasmus M Birn[3], Richard D. Hoge[2,1]
[1]CRIUGM, Montreal, Quebec, Canada, [2]Université de Montréal, Physiology/Biomedical Engineering, Montreal, Quebec, [3]University of Wisconsin, Madison, WI

681* Connectome-Wide Association Studies (CWAS): A Multivariate Distance-Based Approach, (O-Th2)
Zarrar Shehzad[1], Philip Reiss[2], Jonathan Adelstein[3], John Emerson[4], Camille Chabernaud[3], Maarten Mennes[3], Adriana Di Martino[3], Clare Kelly[3], F Xavier Castellanos[3], Michael Milham[3]
[1]Department of Psychology, Yale University, New Haven, United States, [2]NYU Langone Medical Center, New York, United States, [3]Phyllis Green and Randolph Cõwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, United States, [4]Department of Statistics, Yale University, New Haven, United States

682* Complex Network Decoding: Towards an Integration of Graph Theory and Multivariate Pattern Analysis, (O-Th2)
Matthias Ekman[1], Jan Derrfuss[1], Christian Fiebach[2], Marc Tittgemeyer[3]
[1]Nijmegen, Netherlands, [2]Frankfurt, Germany, [3]Max-Planck-Institute for Neurological Research, Cologne, Germany

683 T2*-Dependence Distinguishes Functional Networks from Artifact Components in Individual-Subject ICA**
Prantik Kundu[1], Souheil Inati[1], Peter Bandettini[1], Jennifer Evans[1], Wen-Ming Luh[1]
[1]NIMH, Bethesda, MD

684 Dynamic Causal Modelling of EEG-fMRI data of epileptic seizures**
Teresa Murta[1], Alberto Leal[2], Patrícia Figueiredo[1]
[1]Institute for Systems and Robotics / Instituto Superior Técnico, Lisbon, Portugal, [2]Hospital Júlio de Matos, Lisbon, Portugal

685 SHFP-Self-organizing and Hierarchical Functional Brain Parcellation
Wei Gao[1], Weili Lin[1]
[1]University of North Carolina at Chapel Hill, Chapel Hill, NC

686 Behavioral relevance of temporal variations in brain network connectivity
Catie Chang[1], Xingping Shen[1], Gary Glover[1]
[1]Stanford University, Stanford, CA

687 Driving and Driven Architectures of Small-World Directed Functional Networks of the Human Brain
Chao-Gan Yan[1], Yong He[1]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

688 Brain Network Connectivity and Behaviour Enhancement: A fMRI-BCI Study
Sergio Ruiz[1,2], Tilo Kircher[3], Niels Birbaumer[1], Ranganatha Sitaram[1]
[1]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany, [2]Psychiatry Department, Medicine School, Pontificia Universidad Catolica de Chile, Santiago, Chile, [3]Klinik für Psychiatrie und Psychotherapie der Philipps-Universität Marburg, Marburg, Germany

689 Functional connectivity of the rTPJ as a core region in stimulus-context integration
Oliver Jakobs[1], Svenja Caspers[2], Christian Roski[2], Edna-Clarisse Cieslik[2], Witali Pomjanski[3], Robert Langner[2], Karl Zilles[2], Peter Fox[4], Simon Eickhoff[1]
[1]Department of Psychiatry and Psychotherapy, Aachen, Germany, [2]Research Center Jülich, Institute of Neuroscience and Medicine, Jülich, Germany, [3]C. and O. Vogt Institute for Brain Research, University of Düsseldorf, Düsseldorf, Germany, [4]University Of Texas Health Science Center At San Antonio, San Antonio, United States

690 Capturing inter-subject variability with group ICA of fMRI data: a simulation study
Elena Allen[1], Erik Erhardt[1], Yonghua Wei[2], Tom Eichele[3], Vince Calhoun[1]
[1]Mind Research Network, Albuquerque, United States, [2]University of New Mexico, Albuquerque, United States, [3]University of Bergen, Bergen, Norway

691 Minimum Spanning Tree of the Default Mode Network during Alzheimer's Disease
Koray Ciftci[1]
[1]Namik Kemal University, Corlu Engineering Faculty, Department of Biomedical Engineering, Tekirdag, Turkey

692 Large-scale functional-connectivity graphical models for individual subjects using population prior
Gael Varoquaux[1], Alexandre Gramfort[2], Jean Baptiste Poline[3], Bertrand Thirion[4]
[1]Gif-sur-Yvette, France, [2]INRIA - CEA Neurospin, France, [3]CEA-I2BM-Neurospin, [4]INRIA Futurs, Orsay, France

693 FMRI Resting State Connectivity is Modulated by EEG Alpha-band Synchronization
Rene Scheeringa[1], Karl-Magnus Petersson[2], Ole Jensen[2], Marcel Bastiaansen[3]
[1]Radboud University Nijmegen, Donders Institute for Brain Cognition and Behaviour, [2]Radboud University Nijmegen, Donders insitute fro Brain, Cognition and Behaviour, Nijmegen, Netherlands, [3]Max Planck Institute For Psycholinguistics, Nijmegen, Netherlands

694 Phase synchronization in very low frequency fluctuations of fMRI data
Gabriele Lohmann[1], Maren Grigutsch[1], Daniel Margulies[2], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Berlin School of Mind and Brain, Humboldt University, Berlin , Germany

695 The Neural Correlates of Behavioral Styles in Response to Intrapsychic Conflict
Sebastian Urchs[1], Margaret Zellner[2], Michael Milham[3], Arno Villringer[4], Daniel Margulies[4]
[1]Ludwig-Maximilians Universität, Munich, Germany, [2]The Rockefeller University, New York, United States, [3]New York University, New York, United States, [4]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

696 Subcortical to Cortical Connectivity Revealed using Multi-echo fMRI with T2* Modeling
Prantik Kundu[1], Souheil Inati[1], Jennifer Evans[1], Wen-Ming Luh[1], Peter Bandettini[1]
[1]NIMH, Bethesda, MD

697 Is Respiration Modulation of Resting State fMRI Signals Noise or Function?
Najmeh Khalili Mahani[1,2], Christian F Beckmann[3], Matthias J. P. van Osch[1], Catherine Chang[4], Joop Van Gerven[5,1], Serge Rombouts[1,2]
[1]Leiden University Medical Center, Leiden, Netherlands, [2]Leiden Institute for Brain and Cognition, Leiden, Netherlands, [3]University Of Oxford, Oxford, United Kingdom, [4]Stanford University, Stanford, United States, [5]Center for Human Drug Research, Leiden, Netherlands

698 Filtering induces correlation in fMRI resting state data
Catherine Davey[1,2], David Grayden[3], Gary Egan[4,5], Leigh Johnston[6]
[1]Electronic Engineering, University of Melbourne, Victoria, Australia, [2]NICTA Victorian Research Laboratory, Victoria, Australia, [3]University of Melbourne, Melbourne, Victoria, [4]Howard Florey Institute, Parkville, Victoria, [5]Centre for Neuroscience, University of Melbourne, Victoria, Australia, [6]University of Melbourne, Parkville, Victoria

699 Effects of nicotine and fatigue on brain network topology in smoking subjects
Carsten Giessing[1,2], Christiane Thiel[2], Edward Bullmore[1,3]
[1]Behavioural & Clinical Neuroscience Institute, University of Cambridge, Cambridge, United Kingdom, [2]Biological Psychology Lab, Institute of Psychology, University of Oldenburg, Oldenburg, Germany, [3]Clinical Unit Cambridge, GlaxoSmithKline, Addenbrooke's Centre for Clinical Investigations, Cambridge, United Kingdom

700 On connectivity within the Default Mode Network: an ICA and tractography approach
Erik van Oort[1], David Norris[1]
[1]Radboud University Nijmegen, Donders Institute For Brain, Cognition And Behaviour, Nijmegen, Netherlands

701 Independent sources of spontaneous BOLD fluctuation along the visual pathway
Jacco de Zwart[1], Peter van Gelderen[1], Zhongming Liu[1], Jeff Duyn[1]
[1]Advanced MRI section, LFMI, NINDS, National Institutes of Health, Bethesda, MD

702 Small-world architecture of cortico-basal ganglia circuits in Gilles de la Tourette syndrome
caroline malherbe[1,2], Yulia Worbe[3,4], Arnaud Messé[5,2], Andreas Hartmann[4,3], Mélanie Pélégrini-Issac[5], Marie Vidailhet[4,3], Stéphane Lehéricy[4,2], Habib Benali[6,2]
[1]UMR-S678 Laboratoire d'Imagerie Fonctionnelle, [2]IFR 49, Gif-sur-Yvette, France, [3]INSERM CIC 9503, Hopital Pitié Salpêtrière, Paris, France, [4]CRICM, CNRS UMR 7225, INSERM UMR_S 975, Paris, France, [5]INSERM / UPMC Univ. Paris 06, UMR_S678, LIF, Paris, France, [6]INSERM/ UPMC, Paris, France

703 Model-free analysis of fMRI data using Connectivity Concordance Mapping (CCM)
Gabriele Lohmann[1], Daniel Margulies[2], Arno Villringer[1], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Berlin School of Mind and Brain, Humboldt University, Berlin , Germany

704 Resting-State Networks at Higher Frequencies Using MR-Encephalography
Hsu-Lei Lee[1], Benjamin Zahneisen[1], Thimo Grotz[1], Jürgen Hennig[1]
[1]University Medical Center Freiburg, Freiburg, Germany

705 Resting-state correlations between depths within columns of voxels radial to the cortical surface
Jonathan Polimeni[1,2], Kyoko Fujimoto[1], Boris Keil[1,2], Douglas Greve[1,2], Bruce Fischl[1,2,3], Lawrence Wald[1,2,4]
[1]A.A. Martinos Center for Biomedical Imaging, Department of Radiology, Massachusetts General Hospital, Charlestown, MA, United States, [2]Harvard Medical School, Boston, MA, United States, [3]CSAIL, Massachusetts Institute of Technology, Cambridge, MA, United States, [4]Harvard-MIT Division of Health Sciences and Technology, Cambridge, MA, United States

706 Functional and structural connectivity of visuospatial and visuoperceptive working memory
Roser Sala-Llonch[1], Eva Palacios-Martinez[2], Carme Junque[1], Nuria Bargallo[3], Pere Vendrell[1]
[1]University of Barcelona, Barcelona, Spain, [2]University Of Barcelona, Barcelona, Spain, [3]Neuroradiology Unit. Imaging Diagnostic Center. Hospital Clinic Barcelona. IDIBAPS, Barcelona, Spain

707 Cognitive flexibility is related to functional maturity within striatal networks
Manuel Garcia-Garcia[1], Maarten Mennes[1], Adriana Di Martino[1], Francisco Castellanos[1,2], Michael Milham[1,2], Clare Kelly[1]
[1]Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, New York, NY, [2]Nathan Kline Institute for Psychiatric Research, Orangeburg, NY

708 Effects of prolonged attentional performance on resting state topology
Thomas Breckel[1], Christiane Thiel[1], Edward Bullmore[2,3], Carsten Giessing[1,2]
[1]Biological Psychology Lab, Institute of Psychology, University of Oldenburg, Oldenburg, Germany, [2]Behavioural & Clinical Neuroscience Institute, University of Cambridge, Cambridge, United Kingdom, [3]Clinical Unit Cambridge, GlaxoSmithKline, Addenbrooke's Centre for Clinical, Cambridge, United Kingdom

709 Visualising functional connectivity in fMRI using hierarchical edge bundles
John McGonigle[1], Andrea Malizia[1], Majid Mirmehdi[1]
[1]University of Bristol, Bristol, United Kingdom

710 Task performance globally reduces nonstationarity of functional connectivity
Evan Gordon[1], Melanie Stollstorff[2], Stephanie Bean[1], Chandan Vaidya[1]
[1]Georgetown University, Washington, DC, [2]University of Colorado at Boulder, Boulder, CO

711 Changes in the Composition of Modules Following Focal Brain Lesions
Emi Nomura[1], Caterina Gratton[1], Fernando Perez[1], Mark D'Esposito[1]
[1]Helen Wills Neuroscience Institute, UC Berkeley, Berkeley, CA

712 Changes in default mode relative to task positive mode in short time intervals predict vigilance
Garth Thompson[1], Matthew Magnuson[1], Michael Merritt[2], Hillary Schwarb[2], Wenju Pan[1], Andrew McKinley[3], Eric Schumacher[2], Shella Keilholz[1]
[1]Georgia Institute of Technology and Emory University, Atlanta, GA, [2]Georgia Institute of Technology, Atlanta, GA, [3]Air Force Research Lab, Wright-Patterson Air Force Base, OH

713 Reduction of acquisition time in functional connectivity MRI with 32-channel phased array head coil
Sheeba Anteraper[1], Susan Whitfield-Gabrieli[2], Steven Shannon[1], John Gabrieli[2], Christina Triantafyllou[1]
[1]A.A. Martinos Imaging Center, McGovern Institute for Brain Research, MIT, Cambridge, United States, [2]Department of Brain and Cognitive Sciences, MIT, Cambridge, United States

714 Atypical organization of local and distant functional connectivity in childhood ADHD
Xiaozhen You[1], Evan Gordon[1], Chandan Vaidya[1,2]
[1]Georgetown University, Washington, DC, [2]Children's National Medical Center, Washington, DC

715 Increasing fMRI sampling rate improves Granger causality estimates
Fa-Hsuan Lin[1,2], Jyrki Ahveninen[3], Tommi Raij[3], Thomas Witzel[3], Ying-Hua Chu[4], Kevin Wen-Kai Tsai[4], Wen-Jui Kuo[5], John Belliveau[3]
[1]National Taiwan University, Taipei, Taiwan, [2]Martinos Center, Charlestown, MA, [3]Martinos Center, Massachusetts General Hospital, Charlestown, MA, [4]Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan, [5]Institute of Neuroscience, National Yang Ming University, Taipei, Taiwan

716 Negative weights and degeneracy in complex functional brain networks
Mikail Rubinov[1,3], Olaf Sporns[2]
[1]University of New South Wales, [2]Indiana University, Bloomington, IN, [3]CSIRO Information and Communication Technologies Centre

717 Mirror Visual Feedback Therapy for Phantom Pain: Changes in Functional Connectivity Patterns
Karl-Heinz Nenning[1], Stefan Seidel[1], Gregor Kasprian[1], Julia Furtner[1], Veronika Schoepf[1], Daniela Prayer[1], Georg Langs[2]
[1]Medical University of Vienna, Vienna, Austria, [2]Mit, United States

718 Task Specific Modulations in BOLD fMRI Coherence during Action and Object Naming
Claire Stevenson[1], Mia Liljeström[1], Jan Kujala[1], Riitta Salmelin[2]
[1]Brain Research Unit, Low Temperature Laboratory, Aalto University, AALTO, Finland, [2]Helsinki University of Technology, Helsinki, Finland

719 Comparison between partial and semi-partial correlation on resting-state functional connectivity
Yunyun Zhu[1], Chao-Gan Yan[1], Yufeng Zang[1,2]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, [2]Center for Human Brain Research and Affiliated Hospital, Hangzhou Normal University, Hangzhou, China

720 Withdrawn

721 Effective connectivity in fMRI resting state data via blind deconvolution
Martin Havlicek[1,2,3], Karl Friston[4], Jiri Jan[1], Milan Brazdil[5], Vince Calhoun[3,2]
[1]Brno University of Technology, Brno, Czech Republic, [2]University of New Mexico, Albuquerque, NM, [3]The Mind Research Network, Albuquerque, NM, [4]Wellcome Trust Centre for Neuroimaging, UCL, London, United Kingdom, [5]First Department of Neurology, Masaryk University, St. Anne's Faculty Hospital, Pekarska 53, Brno 65, Brno, Czech Republic

722 Stage-Specific Neural Networks Involved in Working Memory: A Multivariate Analysis
Todd Woodward[1], Dara Manoach[2]
[1]University of British Columbia, Vancouver, Canada, [2]Massachusetts General Hospital, Charlestown, MA

723 Seeing the Forest from the Trees: Making Group Inferences from Individual Connectivity Maps
Kathleen Gates[1], Peter Molenaar[1], John Medaglia[1]
[1]The Pennsylvania State University, State College, PA, United States

724 The ubiquity of small-world networks
Qawi Telesford[1], Karen Joyce[1], Jonathan Burdette[1], Paul Laurienti[1], Satoru Hayasaka[1]
[1]Wake Forest University School of Medicine, Winston-Salem, NC United States

725 Exploring Single Day Variations in Resting State Connectivity
Paul Guillod[1], Adam Thomas[1], Prantik Kundu[1], Jennifer Evans[1], Peter Bandettini[1]
[1]NIHM, NIH, DHHS, Bethesda, MD

726 Detection of abnormal resting state networks in epileptic patients
Christian L Dansereau[1], Francesca Pittau[1], Pierre Bellec[2], Jean Gotman[1], Christophe Grova[3]
[1]McGill University - MNI, Montreal, Canada, [2]CRIUGM, Montreal , Canada, [3]Biomedical Engineering Department, MNI, McGill University, Montreal, Canada

727 Anatomical and Functional Connectivity of Cytoarchitectonic Areas on the Human Parietal operculum
Simon Eickhoff[1], Saad Jbabdi[2], Svenja Caspers[3], Angela R. Laird[4], Peter Fox[5], Karl Zilles[6], Timothy Behrens[7]
[1]Dept. of Psychiatry, UK Aachen, Aachen, Germany, [2]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [3]Institute of Neuroscience and Medicine, INM-2, Research Center Julich, Julich, Germany, [4]Research Imaging Center, University of Texas Health Science Center at San Antonio, San Antonio, TX, [5]University Of Texas Health Science Center At San Antonio, San Antonio, United States, [6]Institute of Neuroscience and Medicine, JÃ¼lich, Germany, [7]Oxford Centre for Functional MRI of the Brain (FMRIB), Oxford, United Kingdom

728 Development of differentiation in amygdalar subregional functional connectivity in young children
Shaozheng Qin[1], Christina Young[1], Vinod Menon[1]
[1]Stanford University, Stanford, CA, United States

729 Age-related spectral connectivity analysis of fMRI data from children listening to stories
Xiangxiang Meng[1], Prasanna Karunanayaka[2], Xiaodong Lin[3], Scott Holland[1]
[1]Cincinnati Children's Hospital, University of Cincinnati, Cincinnati, United States, [2]Department of Radiology (Center for NMR Research), The Pennsylvania State University, Hershey, PA, [3]Department of Management Science and Information Systems, Rutgers University, Piscataway, NJ

730 Interhemispheric integration in early Alzheimer's disease: A dynamic causal modeling study
Romana Rytsar[1], Eleonora Fornari[2], Richard Frackowiak[1], Maria Knyazeva[3,4]
[1]Clinical Neuroscience Dept., CHUV and University of Lausanne, Lausanne, Switzerland, [2]CIBM - CHUV unit, Radiology Dept., CHUV and University of Lausanne, Lausanne, Switzerland, [3]LREN, Clinical Neuroscience Dept., CHUV and University of Lausanne, Lausanne, Switzerland, [4]Radiology Dept., CHUV and University of Lausanne, Lausanne, Switzerland

731 Determining state-related changes in brain connectivity
Ivor Cribben[1], Ragnheidur Haraldsdottir[1], Tor Wager[2], Martin Lindquist[1]
[1]Columbia University, New York, NY, [2]University of Colorado at Boulder, Boulder, CO

732 Evaluating a novel fMRI analysis for identifying regions with common multivoxel encoding principles
Marc Coutanche[1], Sharon Thompson-Schill[1]
[1]University of Pennsylvania, Philadelphia, PA

733 A Dynamic Causal Modeling Study on Working Memory Load
Liangsuo Ma[1], Joel Steinberg[1], Khader Hasan[1], Ponnada Narayana[1], Larry Kramer[1], F. Gerard Moeller[1]
[1]University of Texas Health Science Center at Houston, Houston, United States

734 State Space Modeling as ROI Dimension Reduction and Effective Connectivity for BOLD fMRI data
John Medaglia[1], Kathleen Gates[2], Peter Molenaar[2]
[1]The Pennsylvania State University, [2]The Pennsylvania State University, State College, PA

735 Task or Rest? I'm Game. Linking Intrinsic and Extrinsic Brain Architecture at the Regional Level
Maarten Mennes[1], Clare Kelly[1], Stan Colcombe[2,1], Adriana Di Martino[1], F. Xavier Castellanos[1,2], Michael Milham[1,2]
[1]Phyllis Green and Randolph Cōwen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, United States, [2]Nathan S. Kline Institute for Psychiatric Research, Orangeburg, United States

736 Persistent and Stable BrainMap-Based ICA Networks
Reese McKay[5], Kimberly Ray[1], Mickle Fox[1], Christian Beckmann[2], Stephen Smith[2], Peter Fox[1], Angela Laird[1]
[1]Research Imaging Institute, San Antonio, TX, USA, [2]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [5]CSIRO Information and Communication Technologies Centre

737 Non-Linear Habituation Effects of the Olfactory System: An Independent Component Analysis
Prasanna Karunanayaka[1], Christopher Weitekamp[1], Jianli Wang[1], Paul Eslinger[2,3], Quing Yang[2,4]
[1]Radiology, Center for NMR Research, Penn State University College of Medicine, Hershey, PA, [2]Radiology, Center for NMR Research, PennState University College of Medicine, Hershey, PA, [3]Neurology, Penn State University College of Medicine, Hershey, PA, [4]Neurosurgery, Penn State University College of Medicine, Hershey, PA

738 Estimation of sparse partial correlation in fMRI data using elastic net penalty
Srikanth Ryali[1], Tianwen Chen[1], Kaustubh Supekar[1], Daniel Abrams[1], Vinod Menon[1]
[1]Stanford University, Stanford, United States

739 Hypothesis-based and Data-Driven Approaches to Modeling Instantaneous Causal Networks
Gang Chen[1], Ziad S. Saad[1], J. Paul Hamilton[2], Ian Gotlib[2], Robert Cox[1]
[1]Scientific and Statistical Computing Core, National Institute of Mental Health, NIH, Bethesda, Maryland, USA, [2]Mood and Anxiety Disorders Laboratory, Department of Psychology Stanford University, Stanford, California, USA

740 FIAR: An R package to Analyze Functional Integration in the Brain
Bjorn Roelstraete[1], Yves Rosseel[2]
[1]Ghent University, Belgium, [2]Ghent University, Gent, Belgium

741 Effect of TR on a spectral effective connectivity fMRI study
João Rodrigues[1], Alexandre Andrade[1], Henrique Fernandes[2], Patrícia Figueiredo[3]
[1]IBEB/FCUL, Lisbon, Portugal, [2]Biosurfit, SA, Lisbon, Portugal, [3]Institute for Systems and Robotics / Instituto Superior Técnico, Lisbon, Portugal

742 Neurobiological conditions for self-organized criticality in large networks of spiking neurons
Mikail Rubinov[1,5], Jean-Philippe Thivierge[2], Olaf Sporns[3], Michael Breakspear[4]
[1]University of New South Wales, [2]National Research Council of Canada, Ottawa, Canada, [3]Indiana University, Bloomington, IN, [4]Queensland Institute of Medical Research, Brisbane, Australia, [5]CSIRO Information and Communication Technologies Centre

743 Study of the effective connectivity of the motor system during a planning/execution task using DCM
Elvis Silva[1,2], Gabriela Castellano[1,2]
[1]Institute of Physics "Gleb Wataghin", University of Campinas - UNICAMP, Campinas, Brazil, [2]CInAPCe Program (Cooperação Interinstitucional de Apoio a Pesquisas sobre o Cérebro), São Paulo, Brazil

744 Effective Connectivity Analysis: Some Issues and Possible Solutions Using Linear Dynamic Systems
Jason Smith[1], Ajay Pillai[1], Kewei Chen[2], Barry Horwitz[1]
[1]NIDCD, National Institutes of Health, Bethesda, MD, [2]Arizona State University, Tempe, AZ

745 Relative Connectivity: Sensitive to Changes in ROI Size With No Dependence on SNR and CNR
Ali Golestani[1], Bradley Goodyear[2,3]
[1]Biomedical Engineering, University of Calgary, Calgary, Canada, [2]Radiology & Clinical Neuroscience, University of Calgary, Calgary, AB, [3]Seaman Family MR Research Centre, Calgary, Canada

746 Comparing Simulated and Experimental Functional Neuroimaging Data in a Common Brain Space
Rainer Goebel[1], Barry Horwitz[2]
[1]Maastricht University, Maastricht, Netherlands, [2]NIDCD-NIH, Rockville, United States

747 The Functional Connectivity of Broca's and Wernicke's Areas: A Meta-analytic Approach
Donald Robin[1], Simon Eickhoff[2], Jordan Manes[3], Peter Fox[4], Angela R. Laird[5]
[1]University of Texas Health Science Center at San Antonio, San Antonio, United States, [2]Department of Psychiatry and Psychotherapy, Aachen, Germany, [3]University of Texas, San Antonio, San Antonio, TX, [4]University Of Texas Health Science Center At San Antonio, San Antonio, United States, [5]Research Imaging Center, University of Texas Health Science Center at San Antonio, San Antonio, TX

748 Towards network fMRI neurofeedback: which information is encoded in activation level vs correlation?
Anna Zilverstand[1], Bettina Sorger[1,2,3], Jan Zimmermann[1], Pegah Sarkheil[1], Amanda Kaas[1], Rainer Goebel[1,2]
[1]Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, Netherlands, [2]Maastricht Brain Imaging Centre (M-BIC), Maastricht, Netherlands, [3]Cyclotron Research Centre, University of Liège, Liège, Belgium

749 Using RV-PCA to Probe Age Effects on Functional Connectivity
Hervé Abdi[1], Natasa Kovacevic[2], Cheryl Grady[3], Anthony McIntosh[4]
[1]The University of Texas at Dallas, Richardson, TX, [2]The Rotman Research Institute, Baycrest, 3560 Bathurst Street, Toronto, Ontario, [3]Rotman Research Institute at Baycrest, Toronto, ON, [4]Rotman Research Institute - Baycrest Centre, Toronto, ON

750 Are the Metrics of Functional Connectivity in Resting State fMRI Reliable?
Mark Fiecas[1], Dan van Lunen[2], Alexandre Coimbra[3], Richard Baumgartner[4], Dai Feng[4], Cristina Gorrostieta[5], HERNANDO OMBAO[6]
[1]Brown University, United States, [2]Brown University, Providence, RI, [3]Merck Research Laboratories, United States, [4]Merck Research Laboratories, Rahway, United States, [5]Brown University, Providence, United States, [6]UNIVERSITY OF ILLINOIS, Providence, United States

751 Estimating causal interactions from fMRI time series using Granger causality and transfer entropy
Ying-Hua Chu[1], Yao-Chen Hung[2], Fa-Hsuan Lin[1]
[1]Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan- Republic Of China, [2]Department of Physics, National Chung Cheng University, Chiayi, Taiwan- Republic Of China

752 Optimizing experimental design for identifying networks in the brain using fMRI
Jean Daunizeau[1], Karl Friston[2], Klaas Stephan[1]
[1]Laboratory for Social and Neural Systems Research, Dept. of Economics, University of Zurich, Zurich, Switzerland, [2]Wellcome Trust Centre for Neuroimaging, UCL, Lodnon, United Kingdom

753 Can the default-mode network be described with one spatial-covariance pattern?
Christian Habeck[1], Jason Steffener[1], Yaakov Stern[1]
[1]Columbia University, New York, NY

754 Functional Connectivity of Amygdala and Basal Ganglia with Cortical Regions in Remitted MDD
Klaudius Kalcher[1,2,3], Roland N. Boubela[1,2,3], Wolfgang Huf[1,2,3], Gerald Pail[2], Christian Scharinger[2], Beate Hartinger[2], Christian Windischberger[1], Peter Filzmoser[3], Ewald Moser[1], Siegfried Kasper[2], Lukas Pezawas[2]
[1]Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria, [2]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria, [3]Department of Statistics and Probability Theory, Vienna University of Technology, Vienna, Austria

755 Spatio-temporal Random Effects Modeling for Resting-State Functional Connectivity
Mark Fiecas[1], Hakmook Kang[1]
[1]Brown University,United States

756 Impact of Mindfulness Meditation Training on the Default Mode Network during a Restful State
Veronique Taylor[1,2], Véronique Daneault[1,2], Joshua Grant[1,2,3], Geneviève Scavone[1], Estelle Breton[1], Sébastien Roffe-Vidal[1], Jérôme Courtemanche[1], Anais Lavarenne[1,2], Mario Beauregard[1,2,3,4]
[1]Université de Montréal, Montréal, Canada, [2]Centre de Recherche en Neuropsychologie et Cognition, Montréal, Canada, [3]Centre de Recherche en Sciences Neurologiques, Montréal, Canada, [4]Centre de recherche du Centre hospitalier de la Université de Montréal, Montréal, Canada

757 Cortical Network Modularity Robustly Detected by Singular Value Decomposition of Connection Matrices
Somwrita Sarkar[1], James Henderson[1], Peter Robinson[1]
[1]School of Physics, University of Sydney, Sydney, NSW

758 Detection of functional organization within primary somatosensory cortex by resting-state fMRI
Xiangyu Long[1], Till Nierhaus[2], Daniel Margulies[3], Birol Taskin[4], Arno Villringer[1]
[1]Max Planck Institute For Human Cognitive And Brain Sciences, Germany, [2]Max-Planck-Institute For Cognitive And Brain Sciences, Leipzig, Germany, [3]Berlin School of Mind and Brain, Humboldt University, Berlin , Germany, [4]Department of Neurology, Charite, Humboldt-University, Berlin, Germany

759 Comparative evaluation of functional connectivity as an age and disease marker
Christian Habeck[1], Jason Steffener[1], Yaakov Stern[1]
[1]Columbia University, New York, NY

760 Measuring Resting-State Connectivity in Aging and Behavioral Performance Using Bivariate AR Models
Mark Fiecas[1], Richard Baumgartner[2], Dai Feng[2], Marie Holahan[2], Christopher Cannon[3], HERNANDO OMBAO[4], Jef Vivian[5], Jacquelynn Cook[5], Donald Williams[2], Alexandre Coimbra[6]
[1]Brown University, United States, [2]Merck Research Laboratories, Rahway, United States, [3]Brigham and Women's Hospital, Boston, United States, [4]UNIVERSITY OF ILLINOIS, Providence, United States, [5]Merck Research Laboratories, West Point, PA, [6]Merck Research Laboratories, United States

761 VisualConnectome: Toolbox for brain network visualization and analysis
Dai Dai[1], Huiguang He[1]
[1]Institute of Automation, Chinese Academy of Sciences, Beijing, China

762 Evolving an Agent Based Model of the Brain using Genetic Algorithms
Karen Joyce[1], Paul Laurienti[2], Satoru Hayasaka[1]
[1]Wake Forest University, Winston-Salem, United States, [2]Wake Forest University, Winston-Salem, NC

763 FMRI Connectivity Mapping in First Year Students Reveals Neural Networks Engaged by Alcohol Cues
Adriene Beltz[1], Anna Engels[1], Stephen Wilson[1], Peter Molenaar[1], Carmen Pulido[2], Caitlin Abar[3], Aimee Read[1], Jeremy Fesi[1], Susan Lemieux[1], Susan Tapert[2], Robert Turrisi[1], Sheri Berenbaum[1], Rick Gilmore[1]
[1]The Pennsylvania State University, University Park, PA, [2]University of California San Diego, San Diego, CA, [3]Brown University, Providence, RI

764 Mechanisms for Default Mode Network Suppression
Michael Ferguson[1], Jeffrey Anderson[2], Melissa Lopez-Larson[3], Deborah Yurgelun-Todd[3]
[1]University of Utah, Salt Lake City, UT, [2]University of Utah, Salt Lake City, United States, [3]The Brain Institute, University of Utah, Salt Lake City, UT

765 Investigating Brain Connectivity Using the Mixed Effects Vector Auto-Regressive (ME-VAR) Models
Hernando Ombao[1], Patrick Bedard[2], Cristina Gorrostieta[1], Jerome Sanes[3]
[1]Brown University, Providence, RI, [2]Brown University, Providence, United States, [3]Brown Medical School, Providence, United States

766 Anticorrelated Functional Networks of Infant Brains
Zhishun Wang[1], Pengwei Wang[2], Lianghua He[1], Barbara Graniello[1], Guillermo Horga[1], Bradley Peterson[1]
[1]Columbia University and NYSPI, New York, NY, [2]Columbia University, New York , NY

767 Brainnetome: An Emerging Frontier of Human Brain Mapping
Tianzi Jiang[1]
[1]Institute Of Automation, Chinese Academy Of Sciences, Beijing, China

768 Imaginary coherence of resting-state motor networks in fMRI
Leighton Hinkley[1], Kensuke Sekihara[2], Julia Owen[3], Kelly Westlake[4], Nancy Byl[5], Srikantan Nagarajan[3]
[1]University of California, San Francisco, [2]Tokyo Metropolitan University, Tokyo, Japan, [3]Biomagnetic Imaging Lab, Department of Radiology, University of California in San Francisco, San Francisco, CA, [4]University of Maryland School of Medicine, [5]University of California, San Francisco, San Francisco, CA

769 Exploratory Analysis of the Functional Connectomes Database Using Massively Parallelized FENICA
Roland Boubela[1,2,3], Wolfgang Huf[1,2,3], Klaudius Kalcher[1,2,3], Veronika Schöpf[4], Christian Scharinger[3], Gerald Pail[3], Peter Filzmoser[2], Siegfried Kasper[3], Ewald Moser[1], Lukas Pezawas[3], Christian Windischberger[1]
[1]Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria, [2]Department of Statistics and Probability Theory, Vienna University of Technology, Vienna, Austria, [3]Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria, [4]MR Centre of Excellence, Medical University of Vienna, Vienna, Austria

770 Connectivity in math-gifted adolescents: Comparing SEM with Granger Causality Analysis
Allison McMahon[1], Joseph Bates[1], Bian Li[1], Michael O'Boyle[1], Mary Baker[1]
[1]Texas Tech University, Autumn's Dawn NeuroImaging, Cognition and Engineering Laboratory, Lubbock, TX

771 Brain connectivity in Mensa members
Sunghyon Kyeong[1,2], Minhee Um[3,4], Chang-Won Jang[3,4], Hae-Jeong Park[3,4]
[1]Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Republic of Korea, [2]Department of Radiology and Division of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea, [3]Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Republic Of Korea, [4]Department of Radiology and Division of Nuclear Medicine, Yonsei University College of Medicine, Seoul, Republic Of Korea

772 Does resting- and task-related functional connectivity differ between children and adults?
Lars Michels[1], Marcus Kaiser[2], Rafael Lüchinger[3], Ernst Martin[1], Daniel Brandeis[3]
[1]MR-Center, University Children's Hospital, Zurich, Switzerland, [2]School of Computing Science, Newcastle, United Kingdom, [3]Department of Child and Adolescent Psychiatry, University of Zurich, Zurich, Switzerland

773 Changes in Modular Strength and Structure Following Focal Brain Lesions
Caterina Gratton[1], Emi Nomura[1], Fernando Perez[1], Mark D'Esposito[1]
[1]Helen Wills Neuroscience Institute, UC Berkeley, Berkeley, CA

774 Individual Differences in Brain Networks during Pain Processing: A Method for Assessing Modularity
Matthew Steen[1], Satoru Hayasaka[1], Oleg Lobanov[1], Paul Laurienti[2], Robert Coghill[3]
[1]Wake Forest University School of Medicine, Winston-Salem, NC, [2]Wake Forest University, Winston-Salem, NC, [3]Wake Forest University School of Medicine, Winston-Salem, United States

Language

Reading and Writing

775 Neural plasticity underlying a shift from beginning to skilled reading
Wouter Braet[1], Joline Rediers[2], Hans Op de Beeck[2], Johan Wagemans[2]
[1]University of Leuven (K.U.Leuven), [2]University of Leuven (K.U. Leuven), Leuven, Belgium

776 Distributed neural activity patterns related to phonological reading skill in young readers
Anjali Raja Beharelle[1], Özlem Ece Demir[2], Eva Mok[3], Anthony McIntosh[4], Steven Small[3]
[1]Rotman Research Institute of Baycrest Centre, [2]University of Chicago, Chicago, IL, [3]University of California Irvine, Irvine, CA, [4]Rotman Research Institute, Toronto, Canada

777 Arcuate and inferior longitudinal fasciculus development rates predict reading skills
Jason Yeatman[1], Robert Dougherty[2], Michal Ben-Shachar[3], Elena Rykhlevskaia[2], Brian Wandell[2]
[1]Stanford University, Stanford, United States, [2]Stanford University, Stanford, CA, [3]Bar-Ilan University, Ramat Gan, Israel

778 The neural link between fingerspelled and printed words for deaf signers
Jill Weisberg[1], Jennifer Petrich[1], Stephen McCullough[1], Karen Emmorey[1]
[1]Laboratory for Language and Cognitive Neuroscience, San Diego State University, San Diego, CA

779 Resting-State Functional Connectivity in Compensated Dyslexic Children
Maki Koyama[1], F. Xavier Castellanos[1], Adriana Di Martino[1], Devika Jutagir[1], Clare Kelly[1], Xi-Nian Zuo[2], Maarten Mennes[1], Michael Milham[1]
[1]NYU Child Study Center, New York, United States, [2]Chinese Academy of Sciences, Beijing, China

780 The role of the left ATL in exception word reading: reconciling patient and neuroimaging findings
Maximiliano Wilson[1], Simona Brambati[2], Sylvie Belleville[3], Yves Joanette[3], Isabelle Rouleau[4], Sven Joubert[5]
[1]Centre de recherche de l'Institut universitaire de gériatrie de Montréal and UNF, Montreal , Quebec, [2]Centre de recherche de l'Institut universitaire de gériatrie de Montréal and UNF, Montreal, Quebec, [3]Centre de recherche de l'Institut universitaire de gériatrie de Montréal and Université de Montréal, Montreal, Quebec, [4]Département de psychologie, Université du Québec à Montréal (UQAM), Montreal, Quebec, [5]Université de Montréal, Montreal, Canada

781 Structural brain connectivity covaries with individual differences in reading aloud
William Graves[1], Jeffrey Binder[1], Rutvik Desai[1], Colin Humphries[1], Benjamin Stengel[1], Mark Seidenberg[2]
[1]Medical College of Wisconsin, Milwaukee, USA, [2]University of Wisconsin, Madison, USA

782 Activation Likelihood Estimation (ALE) Meta-analysis of Written Spelling
Jeremy Purcell[1], Brenda Rapp[2], Peter Turkeltaub[3], Guinevere Eden[1]
[1]Center for the Study of Learning, Georgetown University Medical Center, Washington, DC, United States, [2]CogNeuro Research Lab, Department of Cognitive Science, Johns Hopkins University, Baltimore, MD, United States, [3]Department of Neurology, University of Pennsylvania, Philadelphia, PA, United States

783 The level of activity over the motor cortex impacts visual processing of handwritten letters
Yannick Wamain[1], Jessica Tallet[1], Pier-Giorgio Zanone[1], Marieke Longcamp[1,2]
[1]PRISSMH-UPS, Toulouse, France, [2]INCM, CNRS-Université de la Méditerranée, Marseille, France

784 Neural correlates of accommodation in second language learning
Fan Cao[1], Charles Perfetti[2]
[1]university of pittsburgh, [2]university of pittsburgh, Pittsburgh, PA

785 High-density EEG brain imaging in alexia after stroke: evidence for disrupted word processing
Andrei Medvedev[1], Lea Pilgrim[2], Monika Mellem[2], Rhonda Friedman[2]
[1]Center for Functional and Molecular Imaging, Dept. of Neurology, Georgetown University, Washington, DC, [2]Center for Aphasia Research and Rehabilitation, Dept. of Neurology, Georgetown University, Washington, DC

786 Lexicality and Frequency Effects on Chinese Character Reading
Chiao-Yi Wu[1], S.H. Annabel Chen[1], Kayako Matsuo[2], W-Y Isaac Tseng[2], Chih-Wei Hue[2]
[1]Nanyang Technological University, Singapore, [2]National Taiwan University, Taipei, Taiwan

787 Neuroanatomical correlates of aesthetic preference in reading
Isabel Bohrn[1], Ulrike Altmann[1], Oliver Lubrich[1], Winfried Menninghaus[1], Arthur Jacobs[2]
[1]Freie Universität Berlin, Berlin, Germany, [2]Dahlem Institute of Neuroimaging of Emotion, Berlin, Germany

788 Withdrawn

789 Neural basis of writing traditional Chinese character corresponding to phonetic script: a fMRI study
Min-ju Chan[1], Wen-Cheng Chu[2,3], Chia-Chi Lai[3], Ling-Fu Meng[4], Ho-Ling Liu[2,5], Yuan-Yu Hsu[3], Chiu-Ping Lu[4]
[1]Department of Occupational Therapy and Graduate Institute of Clinical Behavioral Science,Chang Gung University, Taoyuan, Taiwan, Republic of China, [2]Department of Medical Imaging and Radiological Sciences, Chang Gung University, Taoyuan, Taiwan, Republic of China, [3]Department of Medical Imaging, Buddhist Tzu Chi General Hospital, Taipei, Taiwan, Republic of China, [4]Department of Occupational Therapy and Graduate Institute of Clinical Behavioral Science, Chang Gung University, Taoyuan, Taiwan, Republic of China, [5]Division of Medical Imaging and Intervention, Chang Gung Memorial Hospital, Taoyuan, Taiwan, Republic of China

790 Impairment of the visual wordform processing in Japanese dyslexic children: an MEG study
Sunao Iwaki[1], Mitsuru Kashiwagi[2], Shuhei Suzuki[3]
[1]National Institute of Advanced Industrial Science and Technology (AIST), Osaka, Japan, [2]Osaka Medical College, Takatsuki, Japan, [3]Osaka Medical College, Takatsuki, Osaka

791 Processing Words with Non-Linear Vowel Diacritics in Hindi Devanagari Script
Chaitra Rao[1], Nandini Singh[2]
[1]National Brain Research Centre, [2]National Brain Research Centre, Manesar, Haryana

792 Literacy breaks the symmetry of alphabetic visual objects
Felipe Pegado[1], Laurent Cohen[2], kimihiro Nakamura[3], Stanislas Dehaene[4]
[1]Neurospin- INSERM U992, [2]ICM; APHP, Paris, France, [3]Neurospin- INSERM U992, gif sur yvette, France, [4]INSERM, U992, Cognitive Neuroimaging Unit, CEA, DSV/I2BM, NeuroSpin Center, F-91191 Gif/Yvette, France

Language

Speech Perception

793* Language discrimination in the infant brain, (O-T3)
Alejandrina Cristia[1], Yasuyo Minagawa-Kawai[2], Inga Vendelin[1], Natalia Egorova[3], Emmanuel Dupoux[1]
[1]LSCP, EHESS, ENS-DEC, CNRS, Paris, France, [2]Keio University, Tokyo, Japan, [3]University of Cambridge, Cambridge, United Kingdom

794* The functional organization of the left STS: a large scale meta-analysis of PET and fMRI studies, (O-T3)
Einat Liebenthal[1,2], Rutvik Desai[1], Colin Humphries[1], Merav Sabri[1]
[1]Medical College of Wisconsin, Milwaukee, WI, [2]National Research Council Institute for Biodiagnostics, Winnipeg, Canada

795 Do elderly hear with their premotor cortices?**
Pascale Tremblay[1], Blythe Buchholz[2], Anthony Dick[3], Steven Small[1]
[1]The University of Chicago, Chicago, United States, [2]The University of Chocago, Chicago, IL, [3]Florida International University, Miami, FL

796 Why do blind people engage the visual cortex during listening to ultra-fast speech?**
Susanne Dietrich[1], Ingo Hertrich[1], Hermann Ackermann[2]
[1]Department of General Neurology, Hertie Institute for Clinical Brain Research, Univ. of Tübingen, Tübingen, Germany, [2]Department of General Neurology, Hertie Institute for Clinical Brain Research, Univ. of Tübingen, Tuebingen, Germany

797 New evidence for a fronto-parietal network in processing intelligible speech**
Daniel Abrams[1], Srikanth Ryali[1], Evan Balaban[2], Daniel Levitin[2], Vinod Menon[1]
[1]Stanford University, Palo Alto, United States, [2]McGill University, Montreal, QC

798 Auditory speech processing and predictive coding in the visual cortex of congenitally blind adults
Laureline Arnaud[1], Lucie Ménard[2], Marc Sato[3], Vincent Gracco[1]
[1]McGill University, Montreal, Canada, [2], Université du Québec à Montréal, Montreal, Canada, [3]GIPSA-lab, CNRS & Grenoble Universités, Grenoble, France

799 Facilitatory tDCS of left inferior frontal gyrus improves perceptual learning of degraded speech
Bernhard Sehm[1,2], Tim Schnitzler[1], Sonia Rossi[1], Jonas Obleser[3], Arno Villringer[1,2], Hellmuth Obrig[1,2]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Department of Neurology, Leipzig, Germany, [2]Clinic of Cognitive Neurology, University of Leipzig, Leipzig, Germany, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Department of Neuropsychology, Leipzig, Germany

800 Hearing by hands: how phonology is processed in the brain
Mario APARICIO[1,2], Philippe PEIGNEUX[3], Danielle BALERIAUX[4], Martin KAVECS[4], Thierry METENS[4], Brigitte Charlier[1], Jacqueline Leybaert[1]
[1]LCLD -Laboratory of cognition, Language and Development, ULB, Bruxelles, Belgium, [2]Postdoctoral Researcher at FRS-FNRS, Bruxelles, Belgium, [3]UR2NF - Neuropsychology and Functional Neuroimaging Research Unit, ULB, Bruxelles, Belgium, [4]Department of Radiology,Clinics of Magnetic Resonance, Hôpital Erasme, ULB, Bruxelles, Belgium

801 Exploring the temporal and spatial characteristics of auditory word comprehension using EEG
Ajay Halai[1,2], Stephen Welbourne[1], Laura Parkes[3], Geoffrey Parker[3]
[1]Neuroscience and Aphasia Research Unit, Univeristy of Manchester, Manchester, United Kingdom, [2]Biomedical Imaging Institute, University of Manchester, Manchester, United Kingdom, [3]Imaging Sciences and Biomedical Engineering, University of Manchester, Manchester, United Kingdom

802 Frontal activity during speech perception differs by modality and available information.
Benjamin Elgie[1], Laura Copeland[1], Shari Baum[1], Vincent Gracco[1]
[1]McGill University, Montreal, Quebec

803 A mediating role of temporal, parietal, and premotor cortices in selective adaptation to speech
Krystyna Grabski[1], Pascale Tremblay[2], Vincent Gracco[3], Marc Sato[4]
[1]Gipsa-Lab, CNRS & Grenoble University, Grenoble, France, [2]University of Chicago, Chicago, USA, [3]McGill University, Montreal, Canada, [4]GIPSA-Lab, CNRS & Grenoble University, Grenoble, France

804 Mirror mechanisms and predictive coding during vowel perception and production
Krystyna Grabski[1], Laurent LAMALLE[2], Marc Sato[1]
[1]GIPSA-lab, Speech and Cognition department, Grenoble, France, [2]Institut Fédératif de Recherche n°1 "RMN Biomédicale et Neurosciences"; Unité IRM 3T / INSERM, Grenoble, France

805 Managing Simultaneity in Speech: Neural Substrates of Simultaneous Interpretation and Shadowing
Alexis Hervais-Adelman[1], Barbara Moser-Mercer[2], Christoph Michel[1], Narly Golestani[1]
[1]Functional Brain Mapping Laboratory, University Of Geneva, Geneva, Switzerland, [2]Ecole de Traduction et d'Interprétation, University of Geneva, Geneva, Switzerland

806 Functional lateralization of prosodic processing: an fMRI study
Jurriaan Witteman[1], Niels Schiller[2], Vincent Van Heuven[2]
[1]Leiden University, [2]Leiden University, Leiden, Netherlands

807 The neural basis of speech rhythm and semantic processing
Kathrin Rothermich[1], Sonja Kotz[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

808 The Effect of Consolidation on the Learning of Novel Spoken Words: an MEG Study
Pierre Gagnepain[1], Richard Henson[1], Matthew Davis[1]
[1]MRC-CBSU, Cambridge, United Kingdom

809 Hearing loss in older adults affects neural systems supporting speech processing
Jonathan Peelle[1], Vanessa Troiani[1], Murray Grossman[1], Arthur Wingfield[2]
[1]University of Pennsylvania, Philadelphia, USA, [2]Brandeis University, Waltham, USA

810 Neural Adaptation of Normal Hearing Listeners to a Portable Cochlear Implant Acoustic Simulation
Christopher Smalt[1], Javier Gonzalez-Castillo[2], Mario Svirsky[3], David Pisoni[4], Thomas Talavage[1]
[1]School of Electrical and Computer Engineering, Purdue University, West Lafayette, IN, USA, [2]National Institute of Mental Health, NIH, Bethesda, MD, USA, [3]New York University School of Medicine, New York, NY, USA, [4]Department of Psychology, Indiana University, Bloomington, IN, USA

811 Neural Synchrony Related to Contextual Effects in Auditory Word Perception in Dyslexia
Jooman Han[1], Maria Mody[1], Seppo Ahlfors[1]
[1]Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA

812 Deactivation depends on the auditory speech complexity: an fMRI study
Isabelle Hesling[1], Bixente Dilharreguy[1], Martine Bordessoules[1], Michèle Allard[2]
[1]Université Bordeaux INCIA UMR CNRS 5287, Bordeaux, France, [2]Université Bordeaux INCIA UMR CNRS 5287, EPHE, Bordeaux, France

813 Instruction dependent modulation of speech production and perception networks in auditory perception
Berge Osnes[1], Kenneth Hugdahl[2], Helene Hjelmervik[1], Karsten Specht[3]
[1]University of Bergen, Bergen, Norway, [2]Division of Psychiatry and Bergen Mental Health Center, Haukeland University Hospital, Bergen, Norway, [3]Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway

814 Functional and anatomical correlates of phonetic categorization in professional musicians
Stefan Elmer[1], Jürgen Hänggi[1], Martin Meyer[1], Lutz Jancke[1]
[1]Division Neuropsychology, Institute of Psychology, University of Zurich, Zurich, Switzerland

815 The Neural System Supporting the Enhancement by Attention of the Processing of Degraded Speech
Conor Wild[1], Matthew Davis[2], Daryl Wilson[3], Afiqah Yusuf[4], Jonathan Peelle[5], Ingrid Johnsrude[6]
[1]Kingston, Canada, [2]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom, [3]Queen's University, Kingston, Ontario, [4]McGill University, Montreal, Quebec, [5]University of Pennsylvania, Philadelphia, PA, [6]Queen's University

Language

Speech Production

816* Identifying regions of the auditory cortex responsible for sensory voice control, (O-T3)
Amy Parkinson[1], Charles Larson[2], Jeremy Greenlee[3], Sabina Flagmeier[1], Jordan Manes[1], William Rogers[1], Donald Robin[1]
[1]University of Texas Health Science Center, San Antonio, TX, [2]Northwestern University, Evanston, IL, [3]University of Iowa, Iowa, United States

817 Withdrawn

818 Resting-state networks of the speech control system
Manjula Khubchandani[1], Barry Horwitz[2], Kristina Simonyan[1]
[1]Mount Sinai School of Medicine, New York, NY, [2]NIDCD-NIH, Rockville, United States

819 Neural correlates of voluntary vs. automatic imitation of speech
Maeva GARNIER[1], Laurent LAMALLE[2], Marc Sato[1]
[1]GIPSA-Lab, Speech and Cognition department, Grenoble, France, [2]Institut Fédératif de Recherche n°1 "RMN Biomédicale et Neurosciences"; Unité IRM 3T / INSERM, Grenoble, France

820 Neural correlates of subsyllabic speech motor sequence learning
Jennifer Segawa[1], Frank Guenther[1], Jason Tourville[1]
[1]Boston University, Boston, MA

821 A large-group fMRI validation of the visual half field technique as language laterality indicator
Lise Van der Haegen[1], Qing Cai[1], Ruth Seurinck[1], Marc Brysbaert[1]
[1]Ghent University, Ghent, Belgium

822 A Magnetoencephalographic investigation of picture-naming in pre-schoolers who stutter
Paul Sowman[1], Blake Johnson[2], Melanie Reid[1], Elisabeth Harrison[1], Stephen Crain[1]
[1]Macquarie University, Sydney, Australia, [2]Macquarie University, Sydney, New South Wales

823 Removal of Muscle Artifacts from EEG Recordings by ICA during overt speech production
Maria Teresa Medaglia[1], Camillo Porcaro[1], Antje Meyer[2], Andrea Krott[3]
[1]Institute of Neuroscience, Newcastle University, Medical School, Newcastle upon Tyne, NE2 4HH, UK, Newcastle, United Kingdom, [2]Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands, Nijmegen, Netherlands, [3]School of Psychology and Birmingham University Imaging Centre, University of Birmingham, Birmingham, Birmingham, United Kingdom

824 Neural control of speech versus nonspeech oral movements: A meta-analytic approach
Sabina Flagmeier[1], Angela Laird[2], Kirrie Ballard[3], Miranda Null[4], Peter Fox[5], Donald Robin[6]
[1]UT Health Science Center San Antonio, [2]Research Imaging Center, University of Texas Health Science Center at San Antonio, San Antonio, TX, [3]University of Sydney, Lidcombe, Australia, [4]UT Health Science Center San Antonio, San Antonio, United States, [5]Research Imaging Center, UT Health Science Center, San Antonio, TX, [6]University of Texas Health Science Center at San Antonio, San Antonio, United States

825 Left dorsal premotor cortex is essential for speech production: Virtual lesion and imaging evidence
Shalini Narayana[1], Wei Zhang[1], Adam Jacks[2], Casey Strickland[1], Crystal Franklin[1], Sara Hartnett[3], Roselyn Ikamba[1], Donald Robin[1], Peter Fox[1]
[1]Research Imaging Institute, University of Texas Health Science Center at San Antonio, San Antonio, TX, USA, [2]The University of North Carolina, Chapel Hill, NC, [3]University of Texas Health Science Center at San Antonio, San Antonio, TX, USA

826 Examining bilingual verb generation with MEG
Elizabeth Pang[1], Matt Macdonald[1]
[1]Hospital for Sick Children, Toronto, Ontario

827 Prominence in English spoken utterances: fMRI evidence for left hemisphere cortical recruitment
Elisa Golfinopoulos[1], Frank Guenther[1,2,3]
[1]Department of Cognitive and Neural Systems, Boston University, Boston, MA, [2]Department of Speech, Language, and Hearing Sciences, Boston University, Boston, MA, [3]Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA

828 Right-hemisphere dominance of language processing dynamics in callosal agenesis
Leighton Hinkley[1], Elysa Marco[2], Jacquelyn Gold[2], Anne Findlay[2], Mari Wakahiro[2], A. James Barkovich[3], Srikantan Nagarajan[4], Elliot Sherr[3]
[1]University of California, San Francisco, [2]University of California, San Francisco, San Francisco, CA, [3]University of California San Francisco, San Francisco, United States, [4]Biomagnetic Imaging Lab, Department of Radiology, University of California in San Francisco, San Francisco, CA

Learning and Memory

Skill Learning

829* Greater integration of a cortico-striatal network following consolidation of motor sequence learning, (O-T4)
Karen Debas[1], Julie Carrier[1], Pierre Orban[1], Marc Barakat[1], Abdallah Hadj Tahar[2], Avi Karni[3], Leslie Ungerleider[4], Guillaume Marrelec[2], Habib Benali[5], Julien Doyon[6]
[1]University of Montreal, Montreal, Canada, [2]Unité de Neuroimagerie fonctionnelle, Montreal, Canada, [3]The Brain-Behavior Research Centre, University of Haifa, Haifa, Israel, [4]Bethesda, United States, [5]INSERM/UPMC, Paris, France, [6]Functional Neuroimaging Unit, University of Montreal Geriatric Institute, Montreal, Quebec

830 Altered Resting State Network during 4 Weeks of Motor Skill Learning
Liangsuo Ma[1], Shalini Narayana[2], Donald Robin[2], Peter Fox[2], Jinhu Xiong[3]
[1]University of Texas Health Science Center at Houston, Houston, United States, [2]University of Texas Health Science Center at San Antonio, San Antonio, United States, [3]University of Iowa, Iowa City, United States

831* Functional reorganization of visuo-motor cortical networks in Formula 1 pilots versus naive drivers, (O-T4)
Giulio Bernardi[1], Emiliano Ricciardi[1,2,3], Lorenzo Sani[1,2,3], Anna Gaglianese[1], Alessandra Papasogli[4], Riccardo Ceccarelli[4], Ferdinando Franzoni[5], Fabio Galetta[5], Gino Santoro[5], Rainer Goebel[6], Pietro Pietrini[1,2]
[1]Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, [2]Department of Laboratory Medicine and Molecular Diagnostics, AOUP, Pisa, Italy, [3]MRI Laboratory, Fondazione Regione Toscana/CNR 'G.Monasterio', Pisa, Italy, [4]Formula Medicine, Viareggio, Italy, [5]Department of Internal Medicine, University of Pisa, Pisa, Italy, [6]Maastricht Brain Imaging Center, Universiteit Maastricht, Maastricht, Netherlands

832 Differential contribution of BA4a and BA4p to the acquisition of motor skill
Nikhil Sharma[1], Michael Dimyan[2], Alissa Fourkas[2], Lindsay Walker[3], Carlo Pierpaoli[4], Leo Cohen[2]
[1]NINDS, Bethesda, [2]NINDS, Bethesda, United States[3], United States, [4]NICHD, Bethesda, United States

833 The Temporal Dynamics of Micro-Structural Plasticity
Ido Tavor[1], Shir Hofstetter[1], Yaniv Sagi[1], Shani Ben Amitay[1], Yaniv Assaf[1]
[1]Tel Aviv University, Tel Aviv, Israel

834 Structural Correlates of Sensorimotor Synchronisation: Evidence from Musicians
Christopher Steele[1], Jennifer Bailey[1], Robert Zatorre[2], Bruce Pike[3], Virginia Penhune[1]
[1]Concordia University, Montreal, Canada, [2]Montreal Neurological Institute, McGill University; BRAMS; CIRMMT, Montreal, Canada, [3]Montreal Neurological Institute, Montreal, Canada

835 Role of Nap on Consolidation of Different Representations of Motor Sequence Memory assessed by fMRI
Genevieve Albouy[1], Stuart Fogel[1], Vo An Nguyen[1], Amel Bouyoucef[1], Frederic Jeay[1], Edwin Robertson[2], Julien Doyon[3]
[1]CRIUGM, University of Montreal, Montreal, Canada, [2]Berenson-Allen Center for Noninvasive Brain Stimulation, Harvard Medical School, Boston, MA, [3]Functional Neuroimaging Unit, University of Montreal Geriatric Institute, Montreal, Quebec

836 Brain Regions Associated with Improved Motor Sequence Performance Following a Daytime Nap
Stuart Fogel[1], Genevieve Albouy[1], Catherine Vien[1], Romana Popovici[1], Vo An Nguyen[1], Frederic Jeay[1], Amel Bouyoucef[1], Richard Hoge[1], Saad Jbabdi[2], Habib Benali[3], Avi Karni[4], Pierre Maquet[5], Julie Carrier[1], Julien Doyon[1]
[1]Functional Neuroimaging Unit, CRIUGM, University of Montreal, Montreal, Canada, [2]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [3]Functional Neuroimaging Laboratory, INSERM, Paris, France, [4]The Brain-Behavior Research Centre, University of Haifa, Haifa, Israel, [5]Cyclotron Research Centre, University of Liege, Liege, Belgium

837 Brain circuits underlying motor learning with haptic guidance and error amplification
Marie-Helene Milot[1], Laura Marchal-Crespo[1], David Reinkensmeyer[1], Steven Cramer[1]
[1]University of California, Irvine, United States

838 Brain Stimulation to the PPC/DLPFC Reveals A Double Dissociation between Learning and Automaticity
Roi Cohen Kadosh[1], Teresa Iuculano[2,1]
[1]University of Oxford, Oxford, United Kingdom, [2]University College London, London, United Kingdom

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>> Thursday, June 30: 10:30 – 13:00 (odd numbers)

839 Structural and Functional Changes in the Brain after one week of Learning a Complex Motor Skill
Martin Gryga[1], Marco Taubert[2], Juergen Dukart[1], Henning Vollmann[1], Virginia Conde[1], Bernhard Sehm[1], Arno Villringer[1], Patrick Ragert[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]Max Planck Institute For Human Cognitive And Brain Sciences, Germany

840 Confounding factors in neurofeedback training based on fMRI of motor imaginary
Tibor Auer[1], Jens Frahm[1]
[1]Biomedizinische NMR Forschungs GmbH am MPI fuer biophysikalische Chemie, Goettingen, Germany

841 Learning effect on brain activity during implicit imitation of bimanual tool making and word speech
Naoki Miura[1], Takeru Akazawa[1], Kenji Nagai[2], Mika Yamazaki[3], Yumiko Yoshida[3], Hiroki Tanabe[3], Norihiro Sadato[3]
[1]Kochi University of Technology, Kami, Japan, [2]Kokushikan University, Tokyo, Japan, [3]National Institute For Physiological Sciences, Okazaki, Japan

Learning and Memory

Working Memory

842 ** **Differentiated parietal connectivity of frontal regions for "what" and "where" memory**
Claudia Rottschy[1], Christian Roski[2], Svenja Caspers[3], Kathrin Reetz[4], Imis Dogan[4], Jörg Schulz[4], Karl Zilles[5], Angela R. Laird[6], Peter Fox[7], Simon Eickhoff[8]
[1]Department of Neurology, University Hospital Aachen, [2]Institute of Neuroscience and Medicine, INM-2, Research Centre Jülich, Juelich, Germany, [3]Institute of Neuroscience and Medicine, INM-2, Research Center Julich, Julich, Germany, [4]Department of Neurology, University Hospital Aachen, Aachen, Germany, [5]Institute of Neuroscience and Medicine, JÃ¼lich, Germany, [6]Research Imaging Center, University of Texas Health Science Center at San Antonio, San Antonio, TX, [7]University Of Texas Health Science Center At San Antonio, San Antonio, United States, [8]Department of Psychiatry and Psychotherapy, Aachen, Germany

843 ** **Pre-chemotherapy differences in working memory in breast cancer patients compared to controls**
Carole Scherling[1], Joyce MacKenzie[2], Nancy Wallis[3], Barbara Collins[2], Andra Smith[3]
[1]School of Psychology, University of Ottawa, Ottawa, Canada, [2]Ottawa Hospital, Ottawa, Ontario, [3]School of Psychology, University of Ottawa, Ottawa, Ontario

844 ** **Functional and anatomical correlates to the performance of an auditory short-term memory task**
Patrick Bermudez[1], Stephan Grimault[2], Christine Lefebvre[3], Pierre Jolicoeur[3]
[1]Université de Montréal, BRAMS Laboratory, Montréal, Canada, [2]Université de Montréal, BRAMS Laboratory, CNRS France, Montréal, Québec, [3]Université de Montréal, BRAMS Laboratory, Montréal, Québec

845 Functional neuroimaging of n-back working memory in school-age preterm children
Sarah Yao Lin[1,2], Elizabeth Donner[1], Wayne Lee[1], Margot Taylor[1,2]
[1]The Hospital for Sick Children, Toronto, Canada, [2]University of Toronto, Toronto, Canada

846 Effects of anxiety feelings on memory-related activations
Hajime Ikenouchi[1], Yayoi Shigemune[2], Kei Takahashi[3], Takashi Tsukiura[3], Ryuta Kawashima[4]
[1]Tohoku University School of Medicine, Sendai, Japan, [2]IDAC, Tohoku university, Sendai, Japan, [3]IDAC, Tohoku University, Sendai, Japan, [4]SAIRC, IDAC, Tohoku Uniersity, Sendai, Japan

847 Different networks and capacity limits for articulatory and non-articulatory mechanisms of verbalSTM
Bernd Kraemer[1], Sabrina Trapp[2], Karsten Mueller[2], Stephan Konrad[2], Joeran Lepsien[2], Oliver Gruber[1]
[1]Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Goettingen, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

848 Functional Brain Network Efficiency Predicts Intelligence
Nicolas Langer[1], Lorena Gianotti[2], Lutz Jaencke[1], Daria Knoch[2], Andreas Pedroni[2], Jürgen Haenggi[3]
[1]University Zurich, Department Neuropsychology, Zurich, Switzerland, [2]University Basel, Social and Affective Neuroscience, Basel, Switzerland, [3]University of Zurich, Institute of Psychology, Zurich, Switzerland

849 Inter and Intra-subject Activation Timing Variation in a Working Memory Task
Stephen Robinson[1], Tom Holroyd[1], Daniel Rubinstein[1], Frederick Carver[1], Richard Coppola[2]
[1]NIMH MEG Core, Bethesda, MD, [2]CBDB, NIMH MEG Core, Bethesda, MD

850 Relations among Personality, Mood and Prefrontal Cortex Activity during Working Memory Tasks
Ryuta Aoki[1,2], Hiroki Sato[3], Takusige Katura[3], Ryoichi Matsuda[1], Hideaki Koizumi[3]
[1]Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan, [2]Research Fellow of the Japan Society for the Promotion of Science, Tokyo, Japan, [3]Advanced Research Laboratory, Hitachi, Ltd., Saitama, Japan

851 Aerobic fitness and cortical thickness in young adults
Karl Koschutnig[1], Kerstin Schweitzer[2], Gernot Reishofer[3], Anja Ischebeck[4], Wolfram Müller[5], Christa Neuper[4], Franz Ebner[3]
[1]Division of Neuroradiology, Graz, Austria, [2]Medical University Graz, Graz, Austria, [3]Medical University Graz, Department of Radiology, Graz, Austria, [4]Karl-Franzens University, Department of Psychology, Graz, Austria, [5]Human Performance Research, Graz, Austria

852 Pitch maintenance in acoustic short-term memory: an MEG study
Synthia Guimond[1], Stephan Grimault[1], Yann Potiez[1], Christine Lefebvre[1], Pierre Jolicoeur[1]
[1]CERNEC, Universite de Montreal, Montreal, Canada

853 Withdrawn

854 Breast cancer chemotherapy alters brain activity during working memory
Kimberly Albert[1], Julie Dumas[1], Barbara Kelly[2], Kim Dittus[3], Paul Newhouse[1]
[1]University of Vermont, Burlington, VT, [2]Vermont Cancer Center, Burlington, VT, [3]FAHC Hematology/ Oncology, Burlington, VT

855 Bold Signal in Memory Paradigms in Hippocampal Region depends on Echo Time
Lena Zeltner[1], Michael Erb[2], Monika Milian[3], Sabine Rona[3], Uwe Klose[4]
[1]Department of Neurology, University Hospital, Tübingen, Germany, [2]MR Research Group, Department of Neuroradiology, University Hospital, Tübingen, Germany, [3]Department of Neurosurgery, University Hospital, Tübingen, Germany, [4]MR Research Group, Department of Neuroradiology, University Hospital, Tübingen, Germany

856 Color Preference Affects the Visual Working Memory Capacity
Masahiro Kawasaki[1], Yoko Yamaguchi[1,2]
[1]RIKEN, BSI-TOYOTA Collaboration Center, Wako, Japan, [2]RIKEN Brain Science Institute, Wako, Japan

857 The Comparison of Task-Related Networks and Resting State Networks During Working Memory
Jessica Cohen[1], Mark D'Esposito[1]
[1]Helen Wills Neuroscience Institute, UC Berkeley, Berkeley, CA

858 Neuronal correlates of reduced memory performance in overweight subjects
Krunoslav Stingl[1,2], Caroline Ketterer[3], Martin Heni[3], Andreas Fritsche[3], Hubert Preissl[1,4]
[1]MEG Center, University of Tuebingen, Tuebingen, Germany, [2]Graduate School of Neural and Behavioural Sciences,International Max Planck Research School, Tuebingen, Germany, [3]Department of Internal Medicine, Division of Endocrinology, Eberhard Karls University Tuebingen, Tuebingen, Germany, [4]Department of Obstetrics and Gynecology, University of Arkansas for Medical Sciences, Little Rock, AR

859 Fiber Tracts Responsible For Face Recognition: A Study Integrating fMRI And Diffusion Tensor Imaging
Kwan-Jin Jung[1], Hae-Song Jung[2], Emilie Muelly[3], Timothy Hughes[4]
[1]Scientific Imaging and Brain Research Center, Department of Psychology, Carnegie Mellon University, Pittsburgh, United States, [2]Department of Psychology, Middlebury College, Middlebury, VT, [3]Center for Emerging Neurotechnology and Imaging, Hershey Neurosciences Institute, Penn State Coll, Hershey, PA, [4]Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA

860 Mathematical Processing in Adolescents: A Functional Magnetic Resonance Study of Addition and Subtr
Prasanna Karunanayaka[1], Mary Hughes[1], Christopher Weitekamp[1], Clancy Blair[2], Jianli Wang[1], Quing Yang[1,3], Paul Eslinger[1,4]
[1]Radiology, Center for NMR Research, Penn State University College of Medicine, Hershey, PA, [2]Human Development and Family Studies, Penn State University College of Medicine, Hershey, PA, [3]Neurosurgery, Penn State University College of Medicine, Hershey, PA, [4]Neurology, Penn State University College of Medicine, Hershey, PA

861 Cortical representation of tactile short-term memory revealed by load manipulation
Ulysse Fortier-Gauthier[1], Stephan Grimault[2], Douglas Cheyne[3], Pierre Jolicoeur[2]
[1]CERNEC, Université de Montréal, Montréal, Canada, [2]CERNEC, Universite de Montreal, Montreal, Canada, [3]Program in Neurosciences and Mental Health, Hospital For Sick Children Research Institute, Toronto, ON

862 The Neural Correlates of Verbal Working Memory Reflect Demands on Inner Speech
Cherie Marvel[1], Monica Faulkner[1], Eric Strain[1], Miriam Mintzer[1], John Desmond[1]
[1]Johns Hopkins University School of Medicine, Baltimore, MD

Lifespan Development

Normal Brain Development: Fetus to Adolescence

863* Detection of Hemispheric Asymmetries during Early Folding by Surface-Based Analysis of Fetal MRI, (O-W1)
Piotr Habas[1], Julia Scott[1], Vidya Rajagopalan[1], Kio Kim[1], Francois Rousseau[2], A. James Barkovich[1], Orit Glenn[1], Colin Studholme[1]
[1]University of California San Francisco, San Francisco, United States, [2]University of Strasbourg, Illkirch, France

864 Development of dynamic causal control signals during cognition in children
Kaustubh Supekar[1], Vinod Menon[1]
[1]Stanford University, Stanford, United States

865 Quantifying asymmetry in local tissue growth patterns in normal fetal human brain
Vidya Rajagopalan[1], Julia Scott[1], Piotr Habas[1], Kio Kim[2], James Corbett-Detig[2], Francois Rousseau[3], A. James Barkovich[2], Orit Glenn[2], Colin Studholme[2]
[1]University of California San Francisco, San Francisco, CA, [2]University of California San Francisco, San Francisco, United States, [3]University of Strasbourg, Illkirch, France

866 Longitudinal evolution of resting-state networks in healthy infants from four to nine months of age
Eswar Damaraju[1], John Phillips[2], Jean Lowe[2], Vince Calhoun[1], Arvind Caprihan[3]
[1]Mind Research Network, Albuquerque, United States, [2]University of New Mexico, Albquerque, United States, [3]Mind Research Network, Abuquerque, United States

867 3D Morphometric Analysis of Human Cerebellar Development during Mid-gestation: An in utero MRI study
Kia Hamzelou[1], Julia Scott[1], Piotr Habas[1], Vidya Rajagopalan[1], Kio Kim[1], A. James Barkovich[1], Orit Glenn[1], Colin Studholme[1]
[1]University of California San Francisco, San Francisco, United States

868 Intellectual Ability is Correlated with Regional Brain Volumes in Normally Developing Children
Christina Boyle[1], Xue Hua[2], Reva Stidd[3], Jay Giedd[4], Judith Rapoport[4], Arthur Toga[5], Paul Thompson[6], Nitin Gogtay[3]
[1]UCLA, Laboratory of Neuro Imaging, Los Angeles, USA, [2]Laboratory Of Neuro Imaging, Department Of Neurology, UCLA School Of Medicine, United States, [3]NIMH Child Pyschiatry Branch, Bethesda, MD, [4]NIMH, Bethesda, DC, [5]UCLA School of Medicine, Department of Neurology, Los Angeles, CA, [6]Laboratory of Neuro Imaging - UCLA School of Medicine, Los Angeles, CA

869 The developmental trajectories of emerging cortical face-networks extend throughout adolescence
Kathrin Cohen Kadosh[1], Mark Johnson[2], Frederic Dick[3], Roi Cohen Kadosh[4], Sarah-Jayne Blakemore[1]
[1]University College London, London, United Kingdom, [2]Centre for Brain and Cognitive Development, Birkbeck College, London, United Kingdom, [3]Birbeck-UCL Centre for Neuroimaging, London, United Kingdom, [4]University of Oxford

870 LINKING MYELINATION WITH BEHAVIOURAL DEVELOPMENT IN HEALTHY INFANTS
Sean Deoni[1], Douglas Dean[1], Beth Jerskey[2]
[1]Brown University School of Engineering, Providence, RI, [2]Alpert Medical School of Brown University, Providence, RI

871 Getting smarter is related to cortical preservation
Miguel Burgaleta[1], Roberto Colom[2], Alan Evans[3], Sherif Karama[3]
[1]Universidad Autónoma De Madrid, Madrid, Spain, [2]Universidad Autónoma de Madrid, Madrid, Spain, [3]McGill University, Montreal, Canada

872 Longitudinal development of white matter and influence of puberty, sex and cognitive factors
Daniel Simmonds[1], David Montez[1], Michael Hallquist[1], Beatriz Luna[1]
[1]University of Pittsburgh, Pittsburgh, PA, USA

873 Regional Cortical Asymmetry from Childhood to Older Adulthood
Dongming Zhou[1], Catherine Lebel[1], Claude Lepage[2], Alan Evans[2], Christian Beaulieu[1]
[1]Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada, [2]McConnell Brain Imaging Center, Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada

874 Tracking Development of the Corpus Callosum in Fetal and Early Postnatal Baboons Using MRI
Kimberley Phillips[1,2,3], Peter Kochunov[4]
[1]Trinity University, [2]Southwest Foundation for Biomedical Research, San Antonio, TX, [3]Research Imaging Institute, University of Texas Health Sciences Center at San Antonio, San Antonio, TX, [4]UTHSCSA, San Antonio, United States

875 Maturation of the default language network: From interhemispheric to intrahemispheric connectivity
Jens Brauer[1], Gabriele Lohmann[1], Angela Friederici[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

876 Age Modulation of Language Task Induced Deactivation in Children
Binjian Sun[1], Madison Berl[2,3], William Gaillard[2,3], Thomas Burns[1], Richard Jones[1,4]
[1]Children's Healthcare of Atlanta, Atlanta, GA, [2]Children's National Medical Center, Washington, DC, [3]George Washington University, Washington, DC, [4]Emory University, Atlanta, GA

877 Functional Connectivity in the Face Network during Adolescence: Sex Difference and Sex-Steroid Genes
Amir Tahmasebi[1], Natasa Kovacevic[1], E Artiges[2], Tobias Banaschewski[3], Gareth Barker[4], Ruediger Bruehl[5], Christian Büchel[6], Patricia Conrod[4], Herta Flor[7], Hugh Garavan[8], Juergen Gallinat[9], Andreas Heinz[9], Bernd Ittermann[5], Eva Loth[4], Klara Mareckova[1], Anthony McIntosh[1], Jean-Luc Martinot[2], Zdenka Pausova[10], Jean Baptiste Poline[11], Marcella Rietschel[12], Michael Smolka[13], Andreas Ströhle[7], Gunter Schumann[4], Tomas Paus[1,14,15], the IMAGEN Consortium[16]
[1]Rotman Research Institute, University of Toronto, Toronto, Canada, [2]Institut National de la Santé et de la Recherche Médicale, Paris, France, [3]Department of Child and Adolescent Psychiatry, Central Institute of Mental Health, Mannheim, Germany, [4]King's College London, Institute of Psychiatry, London, United Kingdom, [5]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [6]NeuroimageNord, Institute for Systems Neuroscience, University-Medical Center Hamburg-Eppendorf, Ger, Hamburg, Germany, [7]Department of Cognitive and Clinical Neuroscience, Central Institute of Mental Health, Mannheim, Germany, [8]Trinity College Institute of Neuroscience, Dublin, Ireland, [9]Department of Psychiatry and Psychotherapy, Campus Charité Mitte, Charité – Universitätsmedizin, Berlin, Germany, [10]Hospital for Sick Children, University of Toronto, Toronto, Canada, [11]CEA-I2BM-Neurospin, Paris, France, [12]Central Institute of Mental Health, Mannheim, Germany, [13]Technische Universität Dresden, Dresden, Germany, [14]School of Psychology, University of Nottingham, Nottingham, United Kingdom, [15]Montreal Neurological Institute, Montreal, Canada, [16]King's College London, London, United Kingdom

878 Developmental Differences in Connectivity within Motor, Task Positive and Default Mode Networks
Anita Barber[1,2], Mary Beth Nebel[1,2], Suresh Joel[1,2], James Pekar[1,2], Stewart Mostofsky[1,2]
[1]Kennedy Krieger Institute, Baltimore, MD, [2]Johns Hopkins University, Baltimore, MD

879 Brain anatomy of children's socioeconomic status
Katarzyna Jednorog[1,2], Irene Altarelli[3], Karla Monzalvo[4], Joel Fluss[5], Catherine Billard[6], Ghislaine Dehaene-Lambertz[6], Franck Ramus[7]
[1]Laboratoire de Sciences Cognitives et Psycholinguistique, ENS, Paris, France, [2]Nencki Institute of Experimental Biology, Warsaw, Poland, [3]Laboratoire de Sciences Cognitives et Psycholinguistique, ENS, PARIS, France, [4]INSERM, U562, CEA/SAC/DSV/I2BM Neurospin, Gif-sur-Yvette, France, [5]Centre de Reference sur les Troubles des Apprentissages, Hopital Bicetre, PARIS, France, [6]INSERM-CEA Cognitive Neuroimaging Unit, GIF/YVETTE, France, [7]Laboratoire de Sciences Cognitives et Psycholinguistique, Ecole Normale Supérieure, Paris, France

880 Brain Connectivity and Verbal Working Memory in Typically Developing Children and Adolescents
Gerbrich van den Bosch[1], Hanan El Marroun[2], Marcus Schmidt[1], Dick Tibboel[1], Dara Manoach[3], Vince Calhoun[4], Tonya White[5]
[1]Erasmus MC-Sophia, Rotterdam, Netherlands, [2]Erasmus Medical Centre -Sophia Children's Hospital, Rotterdam, Netherlands, [3]Massachusetts General Hospital, Charlestown, MA, [4]Mind Research Network, Albuquerque, NM, [5]Erasmus Medical Centre, Rotterdam, Netherlands

881 Newborn brain's responses to speech and non-linguistic emotional vocalizations
Alejandrina Cristia[1], Yasuyo Minagawa-Kawai[2], Inga Vendelin[1], Emmanuel Dupoux[1]
[1]LSCP, EHESS, ENS-DEC, CNRS, Paris, France, [2]Keio University, Tokyo, Japan

882 Maturation of EEG Coherence during Rest and Intermittent Photic Stimulation
Ala Birca[1], Anne Lortie[1], Lionel Carmant[1], Phetsamone Vannasing[1], Maryse Lassonde[1]
[1]Université de Montréal, Montreal, Canada

883 Developmental Changes and Gender Differences in Structural Brain Networks of Children
Budhachandra Khundrakpam[1], Sherif Karama[2], Jens Brauer[3], Felix Carbonell[2], Junki Lee[4], Gaolang Gong[5], Zhang Chen[6], Yong He[7], Alan Evans[2]
[1]Montreal Neurological Institute, Montreal, Canada, [2]McGill University, Montreal, Canada, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [4]Montreal Neurological Institute, Montreal, Quebec, [5]Montreal neurological institute, Montreal, Quebec, [6]McConnell Brain Imaging Centre, Montréal Neurological Institute, McGill University, Montreal, Canada, [7]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, China

884 Age and Gender Effects on the Volume of Corpus Callosum
Wenjing Li[1], Huiguang He[1], Meng Li[1], Qianwen Miao[1], Bin Lv[1], Martin Walter[2]
[1]Institute of Automation, Chinese Academy of Sciences, Beijing, China, [2]Department of Psychiatry, Otto-von-Guericke University, Magdeburg, Germany

885 Rocket-ship MEG: An interactive video game environment to facilitate brain measurements in children
Wendy Tham[1], Melanie Reid[1], Graciela Tesan[1], Blake Johnson[1], Stephen Crain[1]
[1]Macquarie University, Sydney, Australia

886 Finding Stable Sulcal Subunits in Developing Brain: a Group Analysis of Cortical and Depth Maxima
Grégory Operto[1], Guillaume Auzias[2], Denis Rivière[1], Jessica Dubois[3], Petra Huppi[4], Jean-François Mangin[1]
[1]NeuroSpin, CEA, Gif-sur-Yvette, France, [2]CNRS LSIS, Marseille, France, [3]U992 Cognitive NeuroImaging Unit, Gif-sur-Yvette, France, [4]Dept of Pediatrics, University of Geneva, Geneva, Switzerland

887 Withdrawn

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888 Functional Architectures of the Primate Brain and the Implication of Recapitulation Theory
Ci-Rong Liu[1], Synnöve Carlson[2], Tianzi Jiang[3], Yuanye Ma[1]
[1]Kunming Institute of Zoology, Chinese Academy of Science, Kunming, China, [2]Institute of Biomedicine/ Physiology, University of Helsinki, Helsinki, Finland, [3]Institute of Automation, Chinese Academy Of Sciences, Beijing, China

889 Associations between Laterality in Network Connectivity and Children's Motor Abilities
Anita Barber[1,2], Suresh Joel[1,2], Mary Beth Nebel[1,2], James Pekar[1,2], Stewart Mostofsky[1,2]
[1]Kennedy Krieger Institute, Baltimore, MD, [2]Johns Hopkins University, Baltimore, MD

890 The Developing Social Brain: Face-selective Regions in the Superior Temporal Cortex
Sarah Weigelt[1], Kami Koldewyn[1], Eyal Dechter[1], Daniel Dilks[1], Nancy Kanwisher[1]
[1]MIT, Cambridge, United States

891 Testosterone-Related Sex Differences in Cortical Thickness in the Developing Human Brain
Tuong-Vi Nguyen[1], Simon Ducharme[1], Kelly Botteron[2], James McCracken[3], Megan Mahabir[1], Mimi Israel[1], Alan Evans[1], Sherif Karama[1]
[1]McGill University, Montreal, Canada, [2]Washington Univ School Of Medicine Dept. Of Psychiatry, St. Louis, United States, [3]University of California in Los Angeles, Los Angeles, CA

892 Development of Reward-related Circuitry in Adolescence and Young Adulthood
Janna Marie Hoogendam[1], René Kahn[1], Mariët van Buuren[1], Matthijs Vink[1]
[1]Rudolf Magnus Institute Of Neuroscience, University Medical Center Utrecht, Utrecht, Netherlands

893 Structural and functional development of early visual cortical areas: an fMRI and DTI study
Ines Violante[1], Maria Ribeiro[1], André Santos[1], Nicolás Lori[1], Eduardo Silva[1], Miguel Castelo-Branco[1]
[1]IBILI, Faculty of Medicine, University of Coimbra, Coimbra, Portugal

894 A Developmental fMRI Study of Medial Temporal Lobe Activity During Verbal Working Memory in Healthy
Samantha Huang[1], Heidi Thermenos[2,3], Ariel Brown[3,4], Eve Valera[3,4], Jyrki Ahveninen[1], Martin Albert[5], Joseph Biederman[3,4], Nikos Makris[6], Stephen Faraone[3,7], Ming Tsuang[2,8], Larry Seidman[2,3,4]
[1]Harvard Medical School - Martinos Center, Department of Radiology, Massachusetts General Hospital, Charlestown, MA, [2]Massachusetts Mental Health Center Public Psychiatry Division, Beth Israel Deaconess Medical Center, Boston, MA, [3]Department of Psychiatry, Harvard Medical School, Massachusetts General Hospital, Boston, MA, [4]Neuroimaging Program in ADHD and Pediatric Psychopharmacology, Massachusetts General Hospital, Boston, MA, [5]Veterans Affairs Boston Healthcare System, Boston, MA, [6]Harvard Medical School Departments of Neurology and Radiology Services, Center for Morphometric Anal, Boston, MA, [7]SUNY Genetics Research Program and Department of Psychiatry, SUNY Upstate Medical University, Syracuse, NY, [8]Center for Behavior Genomics, University of California, San Diego, La Jolla, CA

895 Phonological Awareness correlate with Caudate Nucleus and Amygdala Volumes in Healthy Children
Beatriz Moreno[1], Luis Concha[1], Leopoldo Gonzalez-Santos[1], Juan Ortiz[1], Fernando Barrios[1]
[1]Universidad Nacional Autonoma de Mexico, QUERETARO, QRO

896 Cortical auditory processing of speech and non-speech stimuli from early childhood to adult life
Natacha Paquette[1,2], Phetsamone Vannasing[2], Mélanie Lefrançois[1,2], Francine Lefebvre[2], Marie-Sylvie Roy[1], Michelle McKerral[1], Franco Lepore[1,2], Maryse Lassonde[1,2]
[1]Centre de Recherche en Neuropsychologie et Cognition, Université de Montréal, Montreal, Quebec, Canada, [2]Centre de Recherche, University Hospital Center Sainte-Justine, Montreal, Quebec, Canada

897 Cerebral Volumes of Prematurely Born Neonates and Fetuses do not differ at similar Gestational Ages
Julia Scott[1], Piotr Habas[1], Kio Kim[1], Vann Chau[2], Kenneth Poskitt[2], A. James Barkovich[1], Steven Miller[2], Orit Glenn[1], Colin Studholme[1]
[1]University of California San Francisco, San Francisco, United States, [2]University of British Columbia, Vancouver, Canada

898 Prenatal Maternal Folate Levels and Fetal Neurodevelopment
Alette Walstra[1], Jolien de Graaff[2], Hanan El Marroun[3], Frank Verhulst[4], Henning Tiemeier[4], Tonya White[4]
[1]ErasmusMC, [2]Erasmusmc, Rotterdam, Netherlands, [3]Erasmus Medical Centre -Sophia Children's Hospital, Rotterdam, Netherlands, [4]Erasmus Medical Centre, Rotterdam, Netherlands

Motor Behavior

Basal Ganglia/Brainstem/Spinal Cord Function

899 Resting State Networks of the Human Cervical Spinal Cord Revealed by Group PICA
Yazhuo Kong[1], Jonathan Brooks[1], Christian Beckmann[2,3], Jesper Andersson[2], Christian Büchel[4], Falk Eippert[4,2]
[1]FMRIB Centre, University Of Oxford, Oxford, United Kingdom, [2]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [3]Radboud University Nijmegen, Nijmegen, Netherlands, [4]University Medical Center Hamburg-Eppendorf, Hamburg, Germany

900 SEPs Mapping during Restoration Functions of Central and Peripheral Nervous System
Sergey Lytaev[1], Olga Timkina[1], Aleksandr Sukhanov[1]
[1]Saint Petersburg State Pediatric Medical Academy, Saint Petersburg, Russian Federation

Motor Behavior

Brain-Machine Interface

901 A brain-computer interface for navigation through a virtual environment in real-time fMRI Studies
Andrea Thoms[1], Charles Mueller[2], Johannes Bernarding[3]
[1]Department for Biometrics and Medical Informatics, [2]IBMI, Otto-Von-Guericke-University, Germany, [3]Otto Von Guericue University, Magdeburg, Germany

902 A Qt-based virtual environment stimulus application for rfMRI using an improved TCP/IP framework
Charles Mueller[1], Michael Lührs[1], Claudia Hänel[2], Andrea Thoms[3], Johannes Bernarding[4]
[1]IBMI, Otto-Von-Guericke-University, Magdeburg, Germany, [2]Institute for Biometry and Medical Informatics, Otto-von-Guericke University Magdeburg, [3]Department for Biometrics and Medical Informatics, [4]Otto Von Guericue University, Magdeburg, Germany

903 An exploratory fNIRS study towards the implementation of a BCI for lower limbs movements
Massimiliano Rea[1], Mohit Rana[1], Pavel Terekhin[1], Ranganatha Sitaram[2], Ann-Christine Ehlis[3], Ramona Taeglich[3], Andreas Fallgatter[4], Niels Birbaumer[1], Andrea Caria[1]
[1]Institute of Medical Psychology and Behavioral Neurobiology, University of Tübingen, Tübingen, Germany, [2]Institute of medical psychology and behavioral neurobiology, University of Tübingen, Tübingen, Germany, [3]Department of Psychiatry and Psychotherapy, University of Tübingen, Tübingen, Germany, [4]Psychophysiology and Optical Imaging, University of Tübingen, Tübingen, Germany

904 Command Classification by using Hidden Markov Model in SSVEP-based Brain Computer Interface
Hua-Ting Deng[1], Po-Lei Lee[1,2,3], Chi-Hsun Wu[1,2], Yen-Ju Lu[1]
[1]Department of Electrical Engineering, National Central University, Jhongli, Taiwan, Republic of China, [2]Department of Medical Research and Education, Taipei General Veterans Hospital, Taipei, Taiwan, Republic of China, [3]Institute of Brain Science, National Yang-Ming University, Taipei, Taiwan, Republic of China

905 Neural decoding of 5 leaning directions in motor imagery from event-related potentials
Yuichiro Takai[1], Hitoshi Nakazawa[2], Masaya Kato[1], Yuki Kamatani[1], Michiteru Kitazaki[3]
[1]Graduate School of Engineering, Toyohashi University of Technology, Toyohashi, Aichi, Japan, [2]Department of Psychology, Senshu University, Kawasaki, Kanagawa, Japan, [3]Department of Computer Science and Engineering, Toyohashi University of Technology, Toyohashi, Aichi, Japan

906 Classical Conditioning of the BOLD signal: a paradigm for basic BCI communication
Giulia Liberati[1], Linda van der Heiden[2], Sunjung Kim[3], Mohit Rana[3], Antonino Raffone[4], Marta Olivetti Belardinelli[5], Piotr Jaskowski[2], Niels Birbaumer[6], Ranganatha Sitaram[7]
[1]Interuniversity Centre for Research on Cognitive Processing in Natural and Artificial Systems, Rome, Italy, [2]Department of Cognitive Psychology, University of Finance and Management, Warsaw, Poland, [3]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Ger, Tuebingen, Germany, [4]Department of Psychology, University "Sapienza" of Rome, Rome, Italy, [5]Interuniversity Centre for Research on Cognitive Processing in Natural and Artificial, Rome, Italy, [6]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany, [7]Institute of medical psychology and behavioral neurobiology, Tuebingen, Germany

907 Neurophysiological prediction of BCI performance for people with ALS
Sebastian Halder[1], Carolin Ruf[1], Adrian Furdea[1], Emanuele Pasqualotto[1], Martin Bogdan[2], Andrea Kübler[3], Wolfgang Rosenstiel[1], Tamara Matuz[1], Niels Birbaumer[4]
[1]University of Tübingen, Tübingen, Germany, [2]University of Leipzig, Leipzig, Germany, [3]University of Würzburg, Würzburg, Germany, [4]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany

908 A SSVEP – based BCI using the combination of biphasic stimulation and hidden Markov model
Hsiang-Chih Chang[1], Kuo-Kai Shyu[1], Po-Lei Lee[1,2,3], Chi-Hsun Wu[1,2], Hung-Yi Wu[1,3]
[1]Department of Electrical Engineering, National Central University, Jhongli, Taiwan, Republic of China, [2]Department of Medical Research and Education, Taipei General Veterans Hospital, Taipei, Taiwan, Republic of China, [3]Institute of Brain Research, National Yang-Ming University, Taipei, Taiwan, Republic of China

909 Real-time feedback enhances cross-frequency coupling of ongoing brain activity during motor imagery
Elizabeth Bock[1], Esther Florin[2,1], Sylvain Baillet[3]
[1]Department of Neurology, Froedtert & The Medical Collegee of Wisconsin, Milwaukee, WI, [2]Department of Neurology, University Hospital Cologne, Cologne, Germany, [3]Departments of Neurology & Biophysics, Froedtert & The Medical Collegee of Wisconsin, Milwaukee, WI

>> Wednesday, June 29: 13:15 – 15:45 (even numbers)
>> Thursday, June 30: 10:30 – 13:00 (odd numbers)

910 Brain signal change during directional hand movements
Hong Gi Yeom[1], June Sic Kim[2], Chun Kee Chung[2]
[1]Interdisciplinary Program in Neuroscience, Seoul National University, Seoul, Korea, Republic of, [2]MEG Center, Department of Neurosurgery, Seoul National University College of Medicine, Seoul, Korea, Republic of

Motor Behavior

Cerebellar Function

911 Catching falling objects and processing sensory prediction errors. An fMRI study
Lilian Fautrelle[1], Cedric Pichat[2], Frederic Ricolfi[3], Carole Peyrin[2], Francois Bonnetblanc[1]
[1]INSERM U887, Dijon, France, [2]CNRS UMR 5105, Grenoble, France, [3]CHU Dijon Neuroradiologie, Dijon, France

912 1. Brain Imaging of Eye Blink Conditioning Following Acute Marijuana Use
Daniel o'Leary[1], John Freeman[1], Julie Koeppel[1], Robert Block[1]
[1]University of Iowa, Iowa City, IA

913 Cerebellum modulates the peripheral information needed for cortical plasticity induction
Traian Popa[1,2,3], Balu Velayudhan[4], Cécile Hubsch[1,2,5], Sabine Meunier[1,5,6], Asha Kishore[4]
[1]Centre de Recherche de l'Institut du Cerveau et de la Moelle épinière (CR-ICM), Paris, France, [2]Université 'Pierre et Marie Curie' (UPMC – Paris 6), Paris, France, [3]Centre de NeuroImagerie de Recherche (CENIR), Paris, France, [4]Comprehensive Care Center for Movement Disorders, SCTIMST, Thiruvanathapuram, India, [5]Inserm UMR-S975, CNRS, UMR 7225, Paris, France, [6]Fédération de Neurologie, Groupe Hospitalier Pitié Salpétrière, Paris, France

Motor Behavior

Eye Movements/ Visuomotor System Function

914* The Search for the Neural Mechanisms of the Set Size Effect, (O-W2)
Trenton Jerde[1], Akiko Ikkai[1], Clayton Curtis[1]
[1]New York University, New York, NY

915 Fronto-parietal interactions for effector selection during reaching: a simultaneous EEG-fMRI study
Pierre-Michel Bernier[1], Scott Grafton[2]
[1]University Of California Santa Barbara, United States, [2]University of California, Santa Barbara, Santa Barbara, CA

916 Cerebellar Activations induced by Saccadic Inaccuracies
Jos van der Geest[1], Esmee Liem[1], Maarten Frens[1]
[1]Neuroscience, Erasmus MC, Rotterdam, Netherlands

917 Withdrawn

918 Functional subdivisions of the human frontal eye fields and their connections to the basal ganglia
Sebastiaan Neggers[1], René Mandl[2], Rosanne van Diepen[2], Tjerk Gutteling[2]
[1]Rudolf Magnus Institute for Neuroscience, Utrecht , Utrecht, [2]Rudolf Magnus Institute for Neuroscience, Utrecht, Netherlands

Motor Behavior

Motor-Premotor Cortical Functions

919* Functional connectivity reveals the mid-cingulate cortex as center axis of intentional motor control, (O-W2)
Felix Hoffstaedter[1], Christian Grefkes[2], Svenja Caspers[3], Christian Roski[3], Angela R. Laird[4], Peter Fox[5], Karl Zilles[6], Simon Eickhoff[1]
[1]Department of Psychiatry and Psychotherapy, Aachen, Germany, [2]Max Planck Institute for Neurological Research Cologne, Cologne, Germany, [3]Institute of Neuroscience and Medicine, INM-2, Research Center Juelich, Juelich, Germany, [4]Research Imaging Center, University of Texas Health Science Center at San Antonio, San Antonio, TX, [5]University Of Texas Health Science Center At San Antonio, San Antonio, United States, [6]Institute of Neuroscience and Medicine, Research Center Juelich, Juelich, Germany

920 Simultaneous EEG-EMG-fMRI investigation of the key movement controllers during isometric contraction
Stephen Mayhew[1], Camillo Porcaro[2], Dirk Ostwald[3], Franca Tecchio[4], Andrew Bagshaw[1]
[1]Birmingham University Imaging Centre (BUIC), University of Birmingham, Birmingham, United Kingdom, [2]Institute of Neuroscience, Newcastle University, Medical School, Newcastle upon Tyne, NE2 4HH, UK, Newcastle, United Kingdom, [3]Department of Neurology and Bernstein Centre for Computational Neuroscience, Charite, Berlin, Germany, [4]3ISTC-CNR, Ospedale Fatebenefratelli, Isola Tiberina, 00186, Rome, Italy

921 Cerebral lateralization of praxis during unimanual and bimanual tool pantomiming
Guy Vingerhoets[1], Frederic Acke[1], Ann-Sofie Alderweireldt[1], Jo Nys[1], Pieter Vandemaele[1], Eric Achten[1]
[1]Ghent University, Ghent, Belgium

922 Moving Hands or Moving Feet: Cortical Connectivity during isolated limb movements
Christian Grefkes[1], Anna-Sophia Sarfeld[1], Svenja Diekhoff[1], Simon Eickhoff[2]
[1]Max Planck Institute for Neurological Research Cologne, Cologne, Germany, [2]Department of Psychiatry and Psychotherapy, Aachen, Germany

923 Functional connectivity of frontal components of the human mirror system: a PPI study
Fausta Lui[1], Davide Duzzi[1], Marta Ghio[2], Armando Bauleo[1], Carlo Porro[1]
[1]University of Modena and Reggio Emilia, Modena, Italy, [2]Scuola Normale Superiore, Pisa, Italy

924 A fine fMRI exploration of hand cortical representation in humans
Chantal Delon-Martin[1], Fabrizio Pizzagalli[2], Michel Dojat[3]
[1]INSERM, F-38700 La Tronche, France, [2]INSERM / Univ. Joseph Fourier Grenoble 1, F-38700 La Tronche, France, [3]INSERM / CEA / Univ. Joseph Fourier Grenoble 1 / CHU, U836 GIN, F-38000 Grenoble, France

925 Hemispheric specialization of praxis in right- and left-handers: Same pattern, different strength
Guy Vingerhoets[1], Ann-Sofie Alderweireldt[1], Frederic Acke[1], Jo Nys[1], Pieter Vandemaele[1], Eric Achten[1]
[1]Ghent University, Ghent, Belgium

926 Attention and the Readiness for Action
Katharine Baker[1], Jason Mattingley[1], Chris Chambers[2], Ross Cunnington[1]
[1]Queensland Brain Institute, The University Of Queensland, St Lucia, Australia, [2]Cardiff University, United Kingdom

927 Corticomuscular coherence between SMA and right hand muscles in a bimanual precision grip task
Sophie Chen[1], Jonathan Entakli[2], Florent JAILLET[3], Jozina De Graaf[2]
[1]Institut of Movement Sciences, CNRS - Aix-Marseille University, Marseille, France, [2]Institut of Movement Sciences, CNRS - Aix-Marseillle University, Marseille, France, [3]Mediterranean Institut of Cognitive Neuroscience, CNRS - Aix-Marseille University, Marseille, France

928 Movement timing and sequencing in the Supplementary Motor Area: high-resolution fMRI at 7.0 Tesla
Ross Cunnington[1], Ronald Sladky[2], Ewald Moser[3], Christian Windischberger[4]
[1]University Of Queensland, St Lucia, Australia, [2]MR Centre Of Excellence, Medical University Of Vienna, Austria, [3]Medical Universsity of Vienna, Vienna, Austria, [4]MR Center, Medical University of Vienna, Vienna, Austria

929 Neural correlates of active and passive movements of hip and knee: an fNIRS study
mohit rana[1,2], massimiliano rea[3], pavel terekhin[3], Ranganatha Sitaram[4], Andreas Fallgatter[5], Ann-Christine Ehlis[6], ramona taeglich[5], Niels Birbaumer[7], Andrea Caria[3]
[1]Institute of Medical Psychology and Behavioral Neurobiology, tuebingen germany, [2]Graduate School of Neural & Behavioural Sciences, tuebingen, Germany, [3]Institute of Medical Psychology and Behavioral Neurobiology, tuebingen, Germany, [4]Institute of medical psychology and behavioral neurobiology, Tuebingen, Germany, [5]Department of Psychiatry and Psychotherapy, tuebingen, Germany, [6]University of Tuebingen, Department of Psychiatry and Psychotherapy, Tuebingen, Germany, [7]Institute of Medical Psychology and Behavioral Neurobiology, University of Tuebingen, Tuebingen, Germany

930 Loss of interhemispheric inhibition is correlated to structural abnormalities in mirror movements
Cecile Gallea[1], Traian Popa[2], Sabine Meunier[3], Cecile Hubsch[3], Vanessa Brochard[3], Romain Valabregue[4], Michael Sharman[4], Christine Delmaire[3], Segolene Billot[3], Marie Vidailhet[3], Stéphane Lehéricy[3], Lucie Hertz-pannier[5], Constance Flamand[3], Emmanuel Roze[3]
[1]Institut du Cerveau et de la Moelle, Paris, France, [2]CRICM, Institut du Cerveau et de la Moelle Epinière, Paris, France, [3]CRICM, Paris, France, [4]Institut du Cerveau et de la Moelle Epiniere, Paris, France, [5]Neurospin, Saclay, France

931 Effect of strength-training on cortical oscillatory activity modulations in isometric contractions
Fabien Dal Maso[1], David Amarantini[1,2], Marieke Longcamp[1,3]
[1]PRISSMH, Université Paul Sabatier, Toulouse, France, [2]Département de kinésiologie, Centre de réadaptation Marie-Enfant, Montréal, Canada, [3]INCM, CNRS-Université de la Méditerranée, Marseille, France

932 Premovement Brain Activity in a Bimanual Load-Lifting Task
Tommy Ng[1], Paul Sowman[1], Jon Brock[1], Blake Johnson[1]
[1]Macquarie University, Sydney, Australia

933 Functional connectivity of the supplementary motor area parceled by domain specific meta-analysis
Shalini Narayana[1], Angela R. Laird[1], Jack Lancaster[1], Peter Fox[1]
[1]Research Imaging Institute, University of Texas Health Science Center at San Antonio, San Antonio, TX, United States

934 Assessing the Functional Significance of MEG Motor Cortex Gamma Oscillations
Cheng Liu[1], William Gaetz[2], Timothy Roberts[2], Hongmei Zhu[1]
[1]Department of Mathematics and Statistics, York University, Toronto, ON, [2]Lurie Family Foundation MEG Imaging Center, Children's Hospital of Philadelphia, Philadelphia, PA

935 Co-speech gesture processing in natural conversation
Michael Andric[1], Steven Small[2]
[1]The University of Chicago, Chicago, United States, [2]University of California Irvine, Irvine, CA

936 Motor control and action goal coding of orofacial movements
Krystyna Grabski[1], Laurent LAMALLE[2], Marc Sato[3]
[1]Gipsa-Lab, Speech and Cognition department, Grenoble, France, [2]Institut Fédératif de Recherche n°1 "RMN Biomédicale et Neurosciences"; Unité IRM 3T / INSERM, Grenoble, France, [3]GIPSA-lab, Speech and Cognition department, Grenoble, France

937 Multi-frequency coordination of cortical oscillations
Tjeerd Boonstra[1], Pete Ashwin[2], Michael Breakspear[3]
[1]University of New South Wales, Sydney, Australia, [2]University of Exeter, Exeter, UK, [3]Queensland Institute of Medical Research, Brisbane, Australia

938 Rostral inferior frontal gyrus monitors visuomotor behaviour by linking visual and motor cortices
Christos Papadelis[1], Carola Arfeller[2], Silvia Erla[3], Giandomenico Nollo[3], Luigi Cattaneo[1], Christoph Braun[1]
[1]Center for Mind/Brain Sciences (CIMeC), University of Trento, Mattarello, Italy, [2]MEG Center, University of Tübingen, Tübingen, Germany, [3]Biophysics and Biosignals Lab, Department of Physics & Biotech, University of Trento, Mattarello, Italy

939 Attention to Actions, Goals, and Agency Influences Neural Activity During Action Observation
Veronika Halasz[1], Jason Mattingley[1], Ross Cunnington[1]
[1]Queensland Brain Institute, The University Of Queensland, St Lucia, Australia

940 Role of the PPC in vestibular information processing during goal-directed movements tested with TMS
Alexandra Reichenbach[1], Jean Pierre Bresciani[2], Heinrich H. Bülthoff[3], Axel Thielscher[4]
[1]MPI For Biological Cybernetics, Germany, [2]Université Pierre Mendes France, Grenoble, France, [3]MPI for Biological Cybernetics, Tübingen, Germany, [4]MPI Biol Cybernetics, TÃ¼bingen, Germany

941 Mapping human motor cortex organization after hemispherectomy: a case study with fMRI, DTI and TMS
Marie-Helene Grosbras[1], Jen-Kai Chen[2], Sandra Leh-Seal[3], Alain Ptito[4]
[1]University of Glasgow, [2]Graduate Department of Rehabilitation Science, Toronto, Canada, [3]Toronto Western Hospital, Toronto, Canada, [4]Department of Psychology, McGill University Health Centre, Montreal, Canada

942 What is so unique about writing with the dominant hand?
Silvina Horovitz[1], Cecile Gallea[2], Muslimah 'Ali Najee-ullah[3], Prantik Kundu[4], Mark Hallett[1]
[1]HMCS - MNB - NINDS - NIH, Bethesda, MD, [2]Hôpital Pitié-Salpêtrière, INSERM, Paris, France, [3]Louis Stokes Institute, Council for Opportunity in Education, Washington, DC, [4]NIMH - NIH, Bethesda, MD

943 Improved Performance Without Detectable M1 GABA Change in Early-phase Implicit Motor Learning
Eric Mooshagian[1,2], Trelawny Zimmermann[2], Jan Willem van der Veen[3], Sasha Tereshchenko[2], Eric Wassermann[2]
[1]Henry M. Jackson Foundation, Bethesda, MD, [2]Brain Stimulation Unit, National Institute of Neurological Disorders and Stroke, Bethesda, MD, [3]Magnetic Resonance Spectroscopy Core, National Institute of Mental Health, Bethesda, MD

944 Imaging of the human sensorimotor cortex using a novel device for feet stimulation: an fMRI study
Elena Kremneva[1], Ludmila Chernikova[1], Rodion Konovalov[1], Marina Krotenkova[1]
[1]Research center of neurology of RAMS, Moscow, Russian Federation

945 Gaze effects on directional coding of reaching in human frontal and parietal cortex
Patrick Bedard[1], Tessa Churchill[1], Jerome Sanes[2]
[1]Brown University, Providence, RI, [2]Brown Medical School, Providence, United States

946 Neural correlates of singing and vocal fold anesthesia – the role of somatosensation
Boris Kleber[1,2], Anthony Zeitouni[3], Robert Zatorre[4]
[1]Montreal Neurological Institute, McGill University; BRAMS; CIRMMT, Montreal, Canada, [2]University of Tübingen, Institute of Medical Psychology and Behavioral Neurobiology, Tübingen, Germany, [3]Department of Otolaryngology Royal Victoria Hospital, Montreal, Canada, [4]Montreal Neurological Institute, McGill University; BRAMS; CIRMMT, Montreal, QC

947 Incidence and Thresholds of Ipsilateral Cortical Silent Period Elicited by Bi-manual Low Force Task
Christopher Rábago[1], Shalini Narayana[2], Wei Zhang[2], Casey Strickland[2], Peter Fox[2], Jack Lancaster[2]
[1]Military Performance Lab, Center for the Intrepid, Fort Sam Houston, San Antonio, TX, United States, [2]Research Imaging Institute, University of Texas Health Science Center at San Antonio, San Antonio, TX, United States

948 Direction of movement is encoded in the human primary motor cortex
Carolien Toxopeus[1,2], Bauke de Jong[1,2], Gopal Valsan[3], Bernard Conway[3], Johannes van der Hoeven[1], Klaus Leenders[1,2], Natasha Maurits[1,2]
[1]Department of Neurology, University Medical Center Groningen, Groningen, Netherlands, [2]Neuroimaging Center (NIC), University of Groningen, Groningen, Netherlands, [3]Bioengineering Unit, University of Strathclyde, Glasgow, United Kingdom

949 Categorization of action sequences in the human motor planning network
Hame Park[1], June Sic Kim[2], Chun Kee Chung[2]
[1]Seoul National University, Seoul, Korea, Republic of, [2]MEG Center, Department of Neurosurgery, Seoul National University College of Medicine, Seoul, Korea, Republic of

950 Action Related Words Modulate the Activity of the Mirror Neuron System during Action Imitation
Haiyan Wu[1], Honghong Tang[1], Yue Ge[1], Yue-Jia Luo[1], Chao Liu[1]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China

951 Difference and similar effects of motor execution and motor imagery on intermanual transfer
kaoru amemiya[1,2,3], Shozo Kojima[4], Yoshiaki Someya[4]
[1]univ of tokyo, [2]Keio GCOE, Tokyo, Japan, [3]JSPS, Tokyo, Japan, [4]Keio GCOE Carls, Tokyo, Japan

952 FMRI study of the observation and imagination of right-handed,left-handed and bilateral hand actions
Sunjin Hong[1], Marie Davergne[2], Paul Kennedy[3], Katie Overy[1], Liz Franz[4], Neil Roberts[3]
[1]School of Music, University of Edinburgh, United Kingdom, [2]Ecole des Hautes Etudes d'Ingénieur, Lille, France, [3]Clinical Research Imaging Centre (CRIC), University of Edinburgh, United Kingdom, [4]Department of Psychology, University of Otagoity of Otago, New Zealand

Neuroanatomy

Brain Networks

953* Connectome Classification: Statistical Graph Theoretic Methods for Analysis of MR-Connectome Data, (O-M3)
Joshua Vogelstein[1], William Gray[2], R. Jacob Vogelstein[3], John Bogovic[4], Susan Resnick[5], Jerry Prince[6], Carey Priebe[2]
[1]Johns Hopkins University, Baltimore, United States, [2]Johns Hopkins University, United States, [3]JHU Applied Physics Lab, Laurel, United States, [4]Johns Hopkins University, [5]National Institute of Aging, National Institute of Health, Baltimore, MD, [6]Johns Hopkins University, Baltimore, MD

954 ** Graph-theory analysis of functional brain connectivity during bimanual coordination in the elderly**
Marcus Heitger[1], Dann Goble[1], Thijs Dhollander[2], Patrick Dupont[3], Stephan Swinnen[1]
[1]Research Center for Movement Control and Neuroplasticity, K.U. Leuven, Belgium, [2]Medical Imaging Research Center, University Hospital Gasthuisberg, Leuven, Belgium, [3]Laboratory for Cognitive Neurology, Dept. of Neurosciences, K.U. Leuven, Belgium

955* Connectional Anatomy of the Middle Temporal Gyrus, (O-T2)
And Umit Turken[1], Nina Dronkers[2]
[1]US Dept of Veterans Affairs, Research Service, Martinez, United States, [2]VA Northern California Health Care System/UC Davis, Martinez, United States

956 Intrinsic Functional Networks in Six-year-old Healthy Children: a large scale rsfMRI study
jidan zhong[1], Anqi Qiu[2,3,4]
[1]NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore, Singapore, [2]Division of Bioengineering, National University of Singapore, Singapore, Singapore, [3]Clinical Imaging Research Center, National University of Singapore, Singapore, Singapore, [4]Singapore Institute for Clinical Sciences, the Agency for Science, Technology and Research, Singapore, Singapore

957 A large-sample fMRI study (n = 1,252) of individual differences in inhibitory control
Robert Whelan[1], Patricia Conrod[2], Jean-Baptiste Poline[3], Tobias Banaschewski[4], Gareth Barker[5], Mark Bellgrove[6], Christian Büchel[7], Mark Byrne[8], Tarrant Cummins[6], Mira Buehler[9], Herta Flor[10], Juergen Gallinat[11], Andreas Heinz[12], Bernd Ittermann[13], Anbarasu Lourdusamy[14], Kar Mann[10], Jean-Luc Martinot[15], Edmund Lalor[8], Mark Lathrop[16], Eva Loth[2], Tomas Paus[17], Marcella Rietschel[10], Michael Smolka[18], Rainer Spanagel[10], Dai Stephens[19], Maren Struve[10], Benjamin Thyreau[20], Sabine Vollstaedt-Klein[10], Trevor Robbins[21], Gunter Schumann[2], Hugh Garavan[1]
[1]Trinity University Dublin, Dublin, Ireland, [2]King's College London, Institute of Psychiatry, London, United Kingdom, [3]CEA-I2BM-Neurospin, [4]Department of Child and Adolescent Psychiatry, Central Institute of Mental Health, Mannheim, Germany, [5]Institute of Psychiatry, King's College, London, United Kingdom, [6]The University of Queensland, St Lucia, Australia, [7]University Medical Center Hamburg-Eppendorf, Hamburg, Germany, [8]Institute of Neuroscience, Trinity College Dublin, Dublin, Ireland, [9]Central Institute of Mental Health, Department of Addictive Behaviour and Addiction Medicine, Mannheim, Germany, [10]Central Institute of Mental Health, Mannheim, Germany, [11]Charite Universitaetsmedizin Berlin, Berlin, Germany, [12]Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Berlin, Germany, [13]Physikalisch-Technische Bundesanstalt, Berlin, Germany, [14]Institute of Psychiatry, London, United Kingdom, [15]Institut National de la Santé et de la Recherche Médicale, Paris, France, [16]Centre National de Génotypage, Evry, France , [17]Rotman Research Institute, University of Toronto, Toronto, Canada, [18]Technische Universität Dresden, Dresden, Germany, [19]Department of Psychology, University of Sussex, Sussex, United Kingdom, [20]CEA Neurospin, Gif sur Yvette, France, [21]University of Cambridge, Cambridge, United Kingdom

958 Anatomical Covariance Pattern Associated with Brain Atrophy in Presymptomatic Huntington's Disease
Shichun Peng[1], Yilong Ma[1], Phoebe Spetsieris[1], Peter Kingsley[1], Andrew Feigin[1], David Eidelberg[1]
[1]Feinstein Institute for Medical Research, Manhasset, NY

959 Regionally constrained voxel-based network of left hippocampus in left medial temporal lobe epilepsy
Jarang Hahm[1], Moo K. Chung[2], Hyejin Kang[1], Sang Kun Lee[3], Dong Soo Lee[1]
[1]Seoul National University, Seoul, Korea, Republic of, [2]University of Wisconsin, Madison, WI, [3]Department of Neurology, Seoul National University College of Medicine, Seoul , Korea, Republic of

960 Functional connectivity profiles of the human hippocampus
Arabinda Mishra[1], Stephan Heckers[1], Baxter Rogers[2]
[1]Vanderbilt University, Nashville, TN, [2]VANDERBILT UNIV. INSTITUTE OF IMAGING SCIENCE, Nashville, United States

961 Sex differences in cerebral anatomy are an effect of testosterone and the X-chromosome
Maki Kasahara[1], Tie-Qiang Li[2], Stefan Arver[3], Ivanka Savic[1]
[1]Dept of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden, [2]Dept of Medical Physics, Karolinska University Hospital, Huddinge, Sweden, [3]Andrology Centre, Karolinska University Hospital, Stockholm, Sweden

962 Directed Brain Network Analysis Based On Granger Causality and Modularity-Based Graph Partitioning
Yu-Teng Chang[1], Dimitrios Pantazis[2], Sylvain Baillet[3], Richard Leahy[1]
[1]University of Southern California, Los Angeles, CA, [2]McGovern Institute for Brain Research, Boston, MA, [3]Medical college of Wisconsin, Milwaukee, WI

963 Characterizing Resting State Network Dynamics in the Brain with Transcranial Magnetic Stimulation
Mark Eldaief[1], Mark Halko[1], Randy Buckner[2], Alvaro Pascual-Leone[1]
[1]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, [2]Harvard University, Department of Psychology, Cambridge, MA

964 Structural and Functional Networks in the Human Brain
Judith Segall[1], Elena Allen[2], Sunil Arja[2], Erik Erhardt[3], Vince Calhoun[2]
[1]Mind Research Network & University of New Mexico, Albuerque, United States, [2]Mind Research Network, Albuquerque, United States, [3]The MIND Research Network, Albuquerque, United States

965 Hemispheric asymmetries of the Default Mode Network: a resting state fMRI study
Victor Saenger[1], Maria de Lourdes Martinez[2], Fernando Barrios[3], Sarael Alcauter[4,3]
[1]Facultad de Ciencias, UNAM., Mexico D.F., Mexico, [2]Instituto Nacional de Psiquiatria, INPRF., Mexico D.F., Mexico, [3]Universidad Nacional Autonoma de Mexico, QUERETARO, QRO, [4]Instituto Nacional de Psiquiatria, INPRF, MEXICO D.F., Mexico

966 Differential Functional Connectivity of the Medial and Lateral Orbitofrontal Cortex
David H. Zald[1], Kimberly Ray[2], Maureen McHugo[1], Simon Eickhoff[3], David Glahn[4], Angela R. Laird[5]
[1]Vanderbilt University, Nashville, TN, [2]UTHSCSA, San Antonio, TX, [3]University Hospital Aachen, Aachen, Germany, [4]Yale University, Hartford, CT, [5]Research Imaging Center, University of Texas Health Science Center at San Antonio, San Antonio, TX

967 Mapping hubs in the neocortical structural network of the human brain shows lateralization
Emil Nijhuis[1,2], Anne-Marie van Cappellen van Walsum[3,2], David Norris[1,2,4]
[1]Donders Institute for Brain, Cognition and Behaviour, Radboud University, Nijmegen, Netherlands, [2]MIRA Institute for Biomedical Technology and Technical Medicine, University of Twente, Enschede, Netherlands, [3]University Medical Centre St. Radboud, Nijmegen, Netherlands, [4]Erwin L Hahn Institute for MRI, Universität Duisburg-Essen, Essen, Germany

968 Looking into the Differences between Gymnastic Champion and Normal in Structural Cortical Networks
Bin Wang[1], Yuanyuan Fan[1], Jun Wang[2], Shumei Li[1], Zheng Song[2], Min Lu[2,3], Xiaoling Peng[1], Hengchan Yin[3], Yong He[2], Ruiwang Huang[1]
[1]Center for Studies of Psychological Application, Guangdong Key Laboratory of Mental Health and Cognitive Science, South China Normal University, Guangzhou 510631, China, [2]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, China, [3]School of Physical Education and Sports Science, Beijing Normal University, Beijing 100875, China

969 Anatomical Connections between Brain Regions of the Autonomic Network
Ruma Goswami[1], Maria F. Frances[1], Harish A. Sharma[2], J. Kevin Shoemaker[3]
[1]School of Kinesiology, The University of Western Ontario, London, Ontario, [2]Robarts Research Institute, The University of Western Ontario, London, Ontario, [3]School of Kinesiology, Dept. of Physiology and Pharmacology, The University of Western Ontario, London, Ontario

970 Inter-subject variability of structural network: a DTI study
Hu Cheng[1], Yang wang[2], Jinhua Sheng[2], Olaf Sporns[1], William Kronenberger[2], Vincent Mathews[2], Tom Hummer[2], Andrew Saykin[2]
[1]Indiana University, Bloomington, IN, [2]Indiana University School of Medicine, Indianapolis, IN

971 Evaluation of Connectivity Measures and Anatomical Features for Statistical Brain Networks
Anand Joshi[1], Shantanu Joshi[1], Moriah Thomason[2], Ivo Dinov[1], Arthur Toga[1]
[1]UCLA School of Medicine, Department of Neurology, Los Angeles, USA, [2]Stanford University/UCLA, United States

972 Disrupted white matter structural networks in clinically isolated syndrome
Ni Shu[1], Yong He[2], Kuncheng Li[3], Yaou Liu[3]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing China, [2]Beijing Normal University, Beijing, China, [3]Department of Radiology, Xuanwu Hospital, Capital Medical University, Beijing, China

973 Graph theoretical analysis of human cerebellum structural network
Lingzhong Fan[1], Zhang Chen[2], Gaolang Gong[3], Yong He[4], Yuchun Tang[5], Shuwei Liu[5], Alan Evans[6]
[1]Institute of Automation of the Chinese Academy of Sciences, Beijing, China, [2]McConnell Brain Imaging Centre, Montréal Neurological Institute, McGill University, Montreal, Canada, [3]Montreal Neurological Institute And Hospital, McGill University, Canada, [4]Beijing Normal University, Beijing, China, [5]Research Center for Sectional and Imaging Anatomy, School of Medicine, Shandong University, Jinan, China, [6]McGill University, Montreal, Canada

974 Overrecruitment of brain regions and network efficiency in cognitive aging
Kristi Clark[1], Katherine Narr[1], Roger Woods[2], Susumu Mori[3], John Mazziotta[4], Arthur Toga[5]
[1]UCLA, Los Angeles, CA, [2]UCLA, LOS ANGELES, CA, [3]The Johns Hopkins University School of Medecine, Baltimore, MD, [4]UCLA Brain Mapping Center, Los Angeles, United States, [5]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA

975 Default network in Deaf
Evguenia Malaia[1], Ruwan Ranaweera[2], Ronnie Wilbur[2], Thomas Talavage[3]
[1]Indiana University, [2]Purdue University, West Lafayette, IN, [3]Purdue University, West Lafayette, United States

976 Exploring CSF Influence on the Human Brain Structural Network Using FLAIR-DTI and Conventional DTI
Shumei Li[1], Pengfei Xu[2], Bin Wang[1], Qixiang Lin[2], Yuanyuan Fan[1], Xiaoling Peng[1], Peng Wang[3], Qian Wang[1], Yong He[2], Ruiwang Huang[1]
[1]Center for Studies of Psychological Application, Guangdong Key Laboratory of Mental Health and Cognitive Science, South China Normal University, Guangzhou 510631, China, [2]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, China, [3]School of Computer Science, South China Normal University, Guangzhou 510631, China

977 Age-related changes in topological organization of structural brain networks
Kai Wu[1], Yasuyuki Taki[2], Kazunori Sato[2], Ryuta Kawashima[3], Yong He[4], Alan Evans[5], Hiroshi Fukuda[2]
[1]Department Of Nuclear Medicine And Radiology, Institute Of Development,Aging And, Japan, [2]IDAC, Tohoku University, Sendai, Japan, [3]SAIRC, IDAC, TOHOKU UniV, Sendai, Japan, [4]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, China, [5]McGill University, Montreal, Canada

978 An Exploratory Investigation of Small-World Brain Functional Networks of Gymnastic World Champions
Min Lu[1,2], Yuanyuan Fan[3], Xiaoling Peng[3], Bin Wang[3], Shumei Li[3], Zheng Song[1], Jinghui Wang[1], Hengchan Yin[2], Yong He[1], Ruiwang Huang[3], Jun Wang[1]
[1]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, China, [2]School of Physical Education and Sports Science, Beijing Normal University, Beijing 100875, China, [3]Center for the Study of Applied Psychology, South China Normal University, Guangzhou 510631, China

979 Spontaneous Brain Oscillations Beyond Resting Brain
I-Ning Tang[1], Tun Jao[2], Ya-Chih Yu[1], Yun-An Huang[1], Edward Bullmore[2], Jyh-Horng Chen[1]
[1]National Taiwan University, Taipei, Taiwan, [2]University Of Cambridge Brain Mapping Unit, Cambridge, United Kingdom

980 The Impact of Tracking Criteria on Brain WM Network Construction
Chun-Yi Lo[1], Wei-Hsu Chang[1], Kun-Hsien Chou[1], Yong He[2], Jinhui Wang[3], Ching-Po Lin[4]
[1]National Yang Ming University, Taiwan- Republic Of China, [2]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, China, [3]State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing 100875, P. R. China, [4]National Yang-Ming University, Taipei, Taiwan- Republic Of China

981 TMS to inferior parietal changes functional connectivity of default and dorsal-attention networks
Mark Halko[1], Mark Eldaief[1], Randy Buckner[2], Alvaro Pascual-Leone[1]
[1]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, [2]Harvard University, Department of Psychology, Cambridge, MA

Neuroanatomy

Cortical Anatomy and Segregation

982 Visualization of the Orientational Structure of the Human Stria of Gennari with High-Resolution DWI
Christoph Leuze[1], Bibek Dhital[1], Alfred Anwander[1], Andre Pampel[1], Robin Heidemann[1], Stefan Geyer[1], Katja Reimann[1], Marcel Gratz[2], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]University of Leipzig, Leipzig, Germany

983 Mapping Human Cortical Areas in vivo Based on Myelin Content as Revealed by T1 and T2-weighted MRI
Matthew Glasser[1], David Van Essen[1]
[1]Washington University, USA

984 Comparison of Surface Gradients Derived from Myelin Maps and Functional Connectivity Analysis
Matthew Glasser[1], Timothy Laumann[1], Timothy Coalson[1], Alexander Cohen[1], Abraham Snyder[1], Bradley Schlaggar[1], Steven Petersen[1], David Van Essen[1]
[1]Washington University, St. Louis, USA

985 Cortical surface and depth analysis of T2* in the human brain
Julien Cohen-Adad[1], Karl Helmer[1], Thomas Benner[1], Jonathan Polimeni[1], Jennifer McNab[1], Lawrence Wald[1], Bruce Rosen[1], Caterina Mainero[1]
[1]A.A. Martinos Center for Biomedical Imaging, MGH, Harvard Medical School, Charlestown, MA, United States

986 *In vitro* layer-specific Diffusion Weighted Imaging in human primary visual cortex
Michiel Kleinnijenhuis[1,2], Markus Barth[2,3], Valerio Zerbi[1,4], Kees-Jan Sikma[1,5], Benno Küsters[6], Cornelis Slump[5], David Norris[2,3], Dirk Ruiter[1,2], Anne-Marie van Cappellen van Walsum[1,7]
[1]Radboud University Nijmegen Medical Centre, Department of Anatomy, Nijmegen, Netherlands, [2]Radboud University Nijmegen, Donders Institute For Brain, Cognition And Behaviour, Nijmegen, Netherlands, [3]Erwin L. Hahn Institute for Magnetic Resonance Imaging, Essen, Germany, [4]Radboud University Nijmegen Medical Centre, Department of Radiology, Nijmegen, Netherlands, [5]University of Twente, Signals and Systems, Electrical Engineering, Mathematics and Computer Science, Enschede, Netherlands, [6]Radboud University Nijmegen Medical Centre, Department of Pathology, Nijmegen, Netherlands, [7]University of Twente, MIRA Institute for Biomedical Technology and Technical Medicine, Enschede, Netherlands

987 High Resolution Structural and Diffusion MRI of *Ex Vivo* Human Motor Cortex
Andre van der Kouwe[1], Thomas Benner[1], Kristen Huber[1], Allison Stevens[1], Matthew Tisdall[1], Bruce Fischl[1,2], Jean Augustinack[1]
[1]MGH/MIT/HMS Athinoula A. Martinos Center for Biomedical Imaging, Charlestown, MA, USA, [2]MIT CSAIL, Cambridge, MA, USA

988 Diffusion Orientations in Primary Sensory Cortices Appear Parallel to the Cortical Surface
Jennifer McNab[1], Jonathan Polimeni[1], Karla Miller[2], Allison Stevens[1], Ruopeng Wang[1], Jean Augustinack[1], Bruce Fischl[1], Lawrence Wald[1]
[1]Harvard Medical School and Massachusetts General Hospital, Boston, MA, USA, [2]FMRIB Centre, Oxford University, Oxford, United Kingdom

989 Convergent Multimodal Clustering of the Insula
Clare Kelly[1], Roberto Toro[2], Adriana Di Martino[1], F. Xavier Castellanos[1,3], Michael Milham[1,3]
[1]Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, USA, [2]Institut Pasteur, Paris, France, [3]Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY, USA

990 Specificity of individual-level functional connectivity: Mapping ventrolateral prefrontal cortex
Daniel Margulies[1], Marco Taubert[1], Patrick Ragert[1], Clare Kelly[2], Bharat Biswal[3], Francisco Castellanos[2], Arno Villringer[1], Michael Milham[2], Michael Petrides[4]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]NYU Child Study Center, New York, United States, [3]UMDNJ, Newark, United States, [4]Montreal Neurological Institute, Montreal, Canada

991 A Large-Scale Voxel-Based Morphometric Study of Grey Matter Density of Alcoholics
Henry Lin[1], Reza Momenan[1], Erica Grodin[1], Daniel Hommer[2]
[1]NIAAA, NIH, Bethesda, MD, [2]NIAAA/NIH, Bethesda, United States

992 Insight into the morphological patterns of the collateral sulcal complex in the human brain
Sonja Huntgeburth[1], Michael Petrides[1]
[1]McGill University, Montreal Neurological Institute, Montreal, Canada

993 Automated extraction of nested sulcal features from human brain MRI data
Arno Klein[1], Forrest Bao[2], Kiho Im[3], Denis Rivière[4]
[1]New York State Psychiatric Institute, Columbia University, New York, United States, [2]Department of Computer Science / Electrical Engineering, Texas Tech University, Lubbock, TX, [3]Children's Hospital Boston, Harvard Medical School, Boston, MA, [4]NeuroSpin, CEA, Orsay, France

Neuroanatomy

Subcortical Structures

994* Surface-based TBM Boosts Power to Detect Disease Effects on the Brain: An N=804 ADNI Study, (O-M3)
Yalin Wang[1], Yang Song[2], Priya Rajagopalan[3], Tuo An[3], Krystal Liu[3], Yi-Yu Chou[3], Boris Gutman[3], Arthur Toga[3], Paul Thompson[3], the Alzheimer's Disease Neuroimaging Initiative (ADNI)[4]
[1]School of Computing, Informatics, Decision Systems Engineering, Arizona State University, Tempe, AZ, [2]Dept. of Mathematics, University of Washington, Seattle, WA, [3]Laboratory of Neuro Imaging, UCLA Dept. of Neurology, Los Angeles, CA, [4]NIA ADEAR Center, Bathesda, MD

995* DTI of the Human Thalamus: Hemispheric and Gender Variability, (O-T2)
Vinod Kumar[1,2], Sarah Mang[3], Susanne Reiterer[1], Wolfgang Grodd[4]
[1]former Section Experimental MR, Dept. of Neuroradiology, University Hospital, Tübingen, Germany, [2]Graduate School of Neural & Behavioural Sciences, International Max Planck Research School, Tübingen, Germany, [3]German Cancer Research Center, Heidelberg, Germany, [4]Department of Psychiatry, Psychotherapy and Psychosomatics, University Hospital, Aachen, Germany

996 Altered striatal morphology in Huntington's disease, Frontotemporal dementia & Alzheimer'disease
Jeffrey Looi[1], Priya Rajagopolan[2], Mark Walterfang[3], Sarah Madsen[2], Paul Thompson[4], Phyllis Chua[5], Dennis Velakoulis[6]
[1]Academic Unit of Psychological Medicine (Psychiatry), Australian National University Medical School, Canberra, Australia, [2]Laboratory of Neuro Imaging, Department of Neurology, UCLA School of Medicine, Los Angeles, CA, United States, [3]Melbourne Neuropsychiatry Centre, Royal Melbourne Hospital, & University of Melbourne, Melbourne, VIC, Australia, [4]Laboratory of Neuro Imaging, Department of Neurology, UCLA School of Medicine, Los Angeles, CA, United States, [5]Alfred Psychiatry Research Centre, Monash University, Melbourne, VIC, [6]Melbourne Neuropsychiatry Centre, Royal Melbourne Hospital, & University of Melbourne, Melbourne, VIC

997 Subcortical Structure Morphometry in Premature Neonates: A Parametric Surface-based Approach
Yalin Wang[1], Ashok Panigrahy[2], Jie Shi[1], Rafael Ceschin[3], Marvin Nelson[4], Paul Thompson[5], Natasha Lepore[4]
[1]Arizona State University, Tempe, AZ, [2]Children's Hospital of Pittsburgh, UPMC, Pittsburgh, PA, [3]Children's Hospital of Pittsburgh Radiology, Pittsburgh, PA, [4]University of Southern California and Children's Hospital Los Angeles, Los Angeles, CA, [5]Laboratory of Neuro Imaging, UCLA, Los Angeles, CA

998 Thalamic Shape and Connectivity Analyses in Children with Attention Deficit/Hyperactivity Disorder
Shugao Xia[1], Ariane Kimball[2], Elyse Sussman[3], Iris Lesser[4], Mary Kelly[4], Craig Branch[1], Xiaobo Li[1]
[1]Gruss Magnetic Resonance Research Center, Department of Radiology, Albert Einstein College of Medicine, Yeshiva University, Bronx, NY, [2]Ferkauf School of Graduate Psychology at Yeshiva University, Bronx, NY, [3]Department of Neuroscience, Albert Einstein College of Medicine, Yeshiva University, Bronx, NY, [4]Department of Pediatrics, Albert Einstein College of Medicine, Yeshiva University, Bronx, NY

999 Characterization of the Human Habenula in-vivo and ex-vivo at 7T
Barbara Strotmann[1], Marcel Weiss[1], Andreas Schaefer[1], Kögler Carsten[1], Robert Trampel[1], Stefan Geyer[1], Arno Villringer[1], Robert Turner[1]
[1]Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

1000 Functional and anatomical architecture linking the basal ganglia and cortex: an MRI study
Nobukatsu Sawamoto[1], Takuya Oguri[1,2], Hayato Tabu[1], Hidenao Fukuyama[1]
[1]HBRC Kyoto University School Of Medicine, Kyoto, Japan, [2]Nagoya City University, Nagoya, Japan

1001 Significant volume and shape abnormalities of basal ganglia in cases of chronic liver cirrhosis
Jian-Shiun Chen[1], Wei-Che Lin[2], Kun-Hsien Chou[1], I-Yun Chen[3], Ching-Po Lin[4]
[1]National Yang Ming University, Taiwan- Republic Of China, [2]Department of Diagnostic Radiology, Chang Gung Memorial Hospital - Kaohsiung Medical Center, Kaohsiung, Taiwan, Republic of China, [3]Institute Of Neuroscience, NYMU, Taiwan- Republic Of China, [4]National Yang-Ming University, Taipei, Taiwan- Republic Of China

1002 Ultra-high resolution ex vivo MR at 7T: the subthalamic nucleus
Marcel Weiss[1], Max Keuken[2], Stefan Geyer[3], Birte Forstmann[4], Robert Turner[1]
[1]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, [2]University of Amsterdam, Utrecht, Netherlands, [3]Max Planck Institute for Human Cognitive and Brain Sciences, Dept. Neurophysics, Leipzig, Germany, [4]University of Amsterdam, Amsterdam, Netherlands

1003 Effect of Family Income on Hippocampus Growth: Longitudinal Study
Moo Chung[1,2], Jamie Hanson[1], Richard Davidson[1], Seth Pollak[1]
[1]University of Wisconsin, Madison, WI, [2]Seoul National University, Korea

Perception and Attention

Perception: Auditory/Vestibular

1004 Sensory and categorical sound representations are intrinsically linked in human auditory cortex
Michelle Moerel[1], Federico De Martino[1], Elia Formisano[1]
[1]Maastricht University, Maastricht, Netherlands

1005 Cortical Processing of Natural Sounds at Multiple Spectral Resolutions
Roberta Santoro[1], Michelle Moerel[1], Federico De Martino[1], Elia Formisano[1]
[1]Maastricht University, Maastricht, Netherlands

1006 Distributed Cortical Representations of Newly-Learned Sound Categories
A Walter[1,2], J Vroomen[2], G Valente[1], P de Weerd[1], E Formisano[1]
[1]Maastricht University, Maastricht, Netherlands, [2]Tilburg University, Tilburg, Netherlands

1007 Transition from Transient to Steady-State Gamma-Band Responses: An MEG Study on Acoustic Beats
Takahiro Miyazaki[1], Jessica Thompson[2], Bernhard Ross[1]
[1]Rotman Research Institute, Baycrest, U of Toronto, Toronto, Ontario, [2]McGill University, Department of Psychology, Montreal, Quebec

1008 **Frequency selectivity and local map structure in human auditory cortex measured with 7-T fMRI**
Cris Lanting[1], Sue Francis[2], Richard Bowtell[2], Katrin Krumbholz[1]
[1]MRC Institute of Hearing Research, Nottingham, United Kingdom, [2]Magnetic Resonance Centre, School of Physics and Astronomy, University of Nottingham, Nottingham, United Kingdom

1009 **"Do You Get it?": An fMRI Study on the Role of Predictive Coding in Speech Perception**
Mareike Clos[1], Robert Langner[2], Martin Meyer[3], Karl Zilles[1,4,5], Simon Eickhoff[1,2,5]
[1]Institute of Neuroscience and Medicine, INM-2, Research Centre Jülich, Jülich, Germany, [2]Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, [3]Department of Neuropsychology, University of Zurich, Zurich, Switzerland, [4]C. and O. Vogt Brain Research Institute, University of Düsseldorf, Düsseldorf, Germany, [5]JARA-Translational Brain Medicine, Jülich-Aachen, Germany

1010 **Localization of auditory change detection sources in the human brain: an MEG study**
Marc Recasens[1], Sabine Grimm[2], Lavinia Slabu[2], Rafal Nowak[3], Almudena Capilla[4], Carles Escera[2]
[1]Cognitive Neuroscience Research Group (University of Barcelona), Barcelona, Spain, [2]Institute for Brain, Cognition and Behavior (IR3C), University of Barcelona, Barcelona, Spain, [3]Magnetoencephalography Unit, Centro Médico Teknon, Barcelona, Spain, [4]Facultad de Psicología, Universidad Autónoma de Madrid, Madrid, Spain

1011 **A DTI Study of Children with Unilateral Sensorineural Hearing Loss**
Vincent Schmithorst[1], Scott Holland[2], Elena Plante[3]
[1]Cincinnati Children's Hospital Medical Center, Cincinnati, OH, [2]Pediatric Neuroimaging Research Consortium, Cincinnati, OH, [3]University of Arizona, Tucson, AZ

1012 **Neural representations of categorically perceived speech in the human auditory system reveal**
Mark Chevillet[1], Xiong Jiang[1], Josef Rauschecker[1], Maximilian Riesenhuber[1]
[1]Georgetown University, Washington, DC

1013 **Using adaptation to investigate the invariance of cortical pitch coding to spectral composition**
Gemma Hutchinson[1], Jessica de Boer[1], Katrin Krumbholz[1]
[1]The Institute of Hearing Research, Nottingham, United Kingdom

1014 **Me, you and them: the perception of native English accents**
Patricia E. G. Bestelmeyer[1], D. Robert Ladd[2], Frances Crabbe[1], Pascal Belin[1]
[1]University of Glasgow, Institute of Neuroscience and Psychology, Glasgow, United Kingdom, [2]University of Edinburgh, School of Philosophy, Psychology and Language Sciences, Edinburgh, United Kingdom

1015 **Resting-State fMRI activity in the tinnitus**
Audrey Maudoux[1], Philippe Lefebvre[1], Jean-Evrard Cabay[2], Audrey Vanhaudenhuyse[1], Athena Demertzi[1], Andrea Soddu[3], Steven Laureys[4]
[1]University of Liege, Liège, Belgium, [2]University of Liège, Liège, Belgium, [3]University of Liege, Liege, Belgium, [4]University of Liege, Belgium, Liege, Belgium

1016 **An analysis of spectral and temporal pitch mechanisms using ERPs and source localization**
Blake Butler[1], Nicole Folland[1], Laurel Trainor[1]
[1]McMaster University, Hamilton, Ontario

1017 **A developmental transition in infants' mismatch response to sound duration change**
Tomomi Mizuochi-Endo[1], Hiroaki Oishi[2], Risako Omori[2], Sho Tsuji[2], Mihoko Hasegawa[2], Reiko Mazuka[2]
[1]Laboratory for Language Development, Brain Science Institute, RIKEN, Saitama, JAPAN, [2]Laboratory for Language Development, Brain Science Institute, RIKEN, Saitama, Japan

1018 **Cochlear Implant Use Stimulates Non-Auditory Areas of the Brain in Some Children**
Daniel Wong[1], Karen Gordon[2]
[1]The Hospital for Sick Children, Toronto, Ontario, [2]The Hospital for Sick Children, Toronto, Canada

1019 **Sorting sounds in the brain – An fMRI study**
Megha Sharda[1], Nandini Singh[2]
[1]National Brain Research Centre, [2]National Brain Research Centre, Gurgaon, India

1020 **Different properties of anatomical network between postlingual and prelingual deaf**
Eunkyung Kim[1], Hyejin Kang[2], Hyo-Jeong Lee[3], Seung-Ha Oh[4], Dong Soo Lee[4]
[1]Seoul National University, Seoul, Korea, Republic of, [2]Seoul National University College of Med, Seoul, Korea, Republic of, [3]Hallym University College of Medicine, Anyang-Si, Gyeonggido, [4]Seoul National University College of Medicine, Seoul, Korea, Republic of

Perception and Attention

Perception: Multisensory and Crossmodal

1021* **Occipital cortical thickness in blind individuals predicts performance in auditory tasks., (O-Th3)**
Patrice Voss[1], Robert Zatorre[1]
[1]McGill University, Montreal, Canada

1022 **Audiovisual Integration in Postlingually-deafened Cochlear Implant Users**
Hyo-Jeong Lee[1], Seung-Ha Oh[2], Jae-Jin Song[2], Hyejin Kang[3], Dong Soo Lee[2]
[1]Hallym University College of Medicine, Anyang-Si, Gyeonggido, Korea, Republic of, [2]Seoul National University College of Medicine, Seoul, Korea, Republic of, [3]Seoul National University College of Med, Seoul, Korea, Republic of

1023 Reduced occipital alpha power indexes enhanced excitability rather than improved visual perception**
Joachim Lange[1], Robert Oostenveld[2], Pascal Fries[3]
[1]Institute of Clinical Neuroscience and Medical Psychology, HHU Düsseldorf, Düsseldorf, Germany, [2]Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands, [3]Ernst Strüngmann Institute (ESI) in Cooperation with Max Planck Society, Frankfurt, Germany

1024 Body ownership is constructed by multisensory integration in premotor and intraparietal areas
Valeria Petkova[1], H Ehrsson[2], Giovanni Gentile[2], Tomas Jonsson[3], Tie-Qiang Li[3]
[1]Karolinska Institute, [2]Karolinska Institute, Stockholm, Sweden, [3]Karolinska Hospital, Huddinge, Sweden

1025 Crossmodal plasticity but no functional specialization in the occipital cortex of late blind humans
Olivier Collignon[1], Genevieve Albouy[2], Giulia Dormal[3], Gilles Vandewalle[4], Patrice Voss[5], Maryse Lassonde[6], Franco Lepore[3]
[1]Université de Montréal, [2]CRIUGM, University of Montreal, Montreal, Canada, [3]Université de Montréal, Montréal, Canada, [4]Functional Neuroimaging Unit, University of Montreal Geriatric Institute, Montreal, Quebec, [5]McGill University, Canada, [6]Universite de Montreal, Montreal, Canada

1026 Audio-haptic binding of conceptual object information
Tanja Kassuba[1,2,3], Mareike Menz[2], Brigitte Röder[4], Hartwig Siebner[5,6,3]
[1]Danish Research Centre for Magnetic Resonance, Copenhagen University Hospital Hvidovre, Hvidovre, Denmark, [2]Neuroimage Nord / Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, [3]Department of Neurology, Christian-Albrechts-University, Kiel, Germany, [4]Biological Psychology and Neuropsychology, University of Hamburg, Hamburg, Germany, [5]Danish Research Centre for Magnetic Resonance, Hvidovre, Denmark, [6]NeuroimageNord / Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

1027 Conjoint and independent neural coding of bimodal face/voice identity investigated with fMRI
Marianne Latinus[1], Frederic Joassin[2], Rebecca Watson[1], Ian Charest[3], Pascal Belin[1,4]
[1]Institute of Neuroscience and Psychology, University of Glasgow, Glasgow, United Kingdom, [2]Université catholique de Louvain, Louvain-la-Neuve, Belgium, [3]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom, [4]2 International Laboratories for Brain, Music and Sound (BRAMS), McGill University and Université de Montréal, Montréal, Québec, Canada

1028 Using steady state responses in MEG to study information integration within and across the senses
Anette Giani[1], Erick Ortiz[2], Paolo Belardinelli[2], Mario Kleiner[1], Hubert Preissl[2], Uta Noppeney[1]
[1]Max Planck Institute for Biological Cybernetics, Tuebingen, Germany, [2]MEG Center, University of Tuebingen, Tuebingen, Germany

1029 A Simultaneous EEG-fMRI Investigation of Visual-Olfactory Information Processing
Carolin Moessnang[1], Christina Regenbogen[2], Thilo Kellermann[3], Andreas Finkelmeyer[3], Frank Schneider[4], Irene Neuner[3], Ute Habel[5]
[1]RWTH Aachen University, [2]RTWH Aachen University, Aachen, Germany, [3]RWTH Aachen University, Aachen, Germany, [4]RWTH Aachen University, Department of Psychiatry, Psychotherapy and Psychosomatics, Aachen, Germany, [5]University of Aachen, Aachen, Germany

1030 Posterior insular cortex processing of pain and C fiber touch in a neuronopathy patient
Malin Björnsdotter[1], Marta Ceko[2], David Seminowicz[2], Simon Bergstrand[1], Catherine Bushnell[2], Hakan Olausson[1]
[1]University of Gothenburg, Goteborg, Sweden, [2]McGill University, Montreal, Canada

1031 Early attention modulates perceptual interpretation of multisensory stimuli: an MEG study
Mikhail Zvyagintsev[1], Andrey Nikolaev[2], Olga Sachs[3], Klaus Mathiak[1]
[1]RWTH Aachen University, Aachen, Germany, [2]RIKEN Brain Science Institute, Wako-shi, Japan, [3]Fraunhofer Center for Sustainable Energy Systems CSE, Cambridge, MA

1032 Effects of incongruence in audiovisual gender integration: an fMRI study
Rebecca Watson[1], Marianne Latinus[1], Ian Charest[2], Patricia Bestelmeyer[1], Frances Crabbe[3], Pascal Belin[1]
[1]Voice Neurocognition Laboratory, Institute of Neuroscience and Psychology, University of Glasgow, Glasgow, United Kingdom, [2]MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom, [3]Institute of Neuroscience and Psychology, University of Glasgow, Glasgow, United Kingdom

1033 Cortical dynamics of perception and decision in sensory tasks: an MEG study
Lucia Maria Vaina[1], Kunjan Rana[2], Matti Hämäläinen[3]
[1]Boston University& Harvard Medical School, Massachusetts General Hospital, U.S.A., [2]Boston University, BME, Brain and Vision Research Laboratory, Boston, MA, [3]Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA

1034 FMRI-adaptation reveals selectivity for the space near the hand
Claudio Brozzoli[1], Giovanni Gentile[1], Valeria Petkova[1], H Ehrsson[1]
[1]Karolinska Institute, Stockholm, Sweden

1035 A possible common corticofugal system for Music and Speech
Mariacristina Musso[1], Volkmer Glauche[2], Bettina Rieck[2], Rebecca Sautter[3], Cornelius Weiller[2]
[1]Neurology, [2]Neurology Uniklinik Freiburg, Freiburg, Germany, [3]University Of Freiburg-Department Of Neurology, Germany

1036 MEG Analysis of the Relationship between Visual and Audiory Modalities as Inducing Feelings
Chia-Yen Yang[1], Ching-Po Lin[2]
[1]Ming-Chuan University, Taoyuan, Taiwan, [2]National Yang-Ming University, Taipei, Taiwan- Republic Of China

1037 Brain Activity in the Color Area When Listening to Music: An fMRI Study of Synesthesia
Ryuzo Yayama[1], Takayuki Shimotomai[2], Riuma Takahashi[1], Satoshi Akatsuka[1], Eriko Aiba[1], Takashi Fujisawa[1], Noriko Nagata[1]
[1]Kwansei Gakuin University, Sanda, Japan, [2]Tamagawa University, Machida, Japan

1038 Brain Activity in Grapheme-Color Synesthetes When Seeing Japanese Letters: An fMRI Study
Hiroshi Mazaki[1], Mayuka Nishimoto[1], Satoshi Akatsuka[1], Ryuzo Yayama[1], Takayuki Shimotomai[2], Eriko Aiba[1], Noriko Nagata[1]
[1]Kwansei Gakuin University, Sanda, Japan, [2]Tamagawa University, Machida, Japan

Perception and Attention

Perception: Pain and Visceral

1039 ** **Multivariate Decoding of Pain and the Quest for Legal Evidence**
Kay Brodersen[1], Chia-shu Lin[2], Ekaterina Lomakina[1], Klaas Enno Stephan[3], Katja Wiech[2], Irene Tracey[2]
[1]ETH Zurich, Zurich, Switzerland, [2]University of Oxford, Oxford, United Kingdom, [3]University of Zurich, Zurich, Switzerland

1040 Independent component analysis of the illusion of duration and pain perception, an fMRI study
Florence Pomares[1,2], Isabelle Faillenot[1,3], Roland Peyron[1,2]
[1]Inserm U879; UCB Lyon1; UJM, Saint-Etienne, France, [2]Department of Neurology and Pain Centre, Saint-Etienne, France, [3]CM2R CHU, Saint-Etienne, France

1041 Investigating the brain's response to contact heat evoked potentials (CHEPs) with EEG-fMRI
Nick Hylands-White[1], Stephen Mayhew[1], Camillo Porcaro[2], Stuart Derbyshire[1], Andrew Bagshaw[1]
[1]Birmingham University Imaging Centre (BUIC), University of Birmingham, Birmingham, United Kingdom, [2]Institute of Neuroscience, Newcastle University, Medical School, Newcastle upon Tyne, NE2 4HH, UK, Newcastle, United Kingdom

1042 The Brain Circuitry of Nausea: a reappraisal of interoceptive afference
Vitaly Napadow[1], James Sheehan[2], Jieun Kim[3], Lauren LaCount[3], Kyungmo Park[4], Ted Kaptchuk[5], Bruce Rosen[3], Braden Kuo[6]
[1]Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, [2]Massachusetts General Hospital, Peabody, MA, [3]Martinos Center for Biomedical Imaging, Charlestown, MA, [4]Department of Biomedical Engineering, Kyunghee University, Yongin, Korea, Democratic People's Republic of, [5]Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, [6]Massachusetts General Hospital, Boston, MA

1043 Acupuncture analgesia in fibromyalgia is related to changes in resting fMRI connectivity
Jieun Kim[1], Richard Harris[2], Daniel Clauw[2], Vitaly Napadow[1]
[1]Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Boston, MA, United States, [2]University of Michigan, Ann Arbor, MI, United States

1044 Brainstem-fMRI reveals: Acupuncture's antiemetic effect is due to sympathetic deactivation
Florian Beissner[1], Ralf Deichmann[2], Sandra Anti[3], Christian Henke[4], Karl-Jürgen Bär[1]
[1]Pain & Autonomics - Integrative Research, Clinic for Psychiatry and Psychotherapy, Jena, Germany, [2]Brain Imaging Center, Goethe University, Frakfurt, Germany, [3]Brain Imaging Center, Goethe University, Frankfurt, Germany, [4]Clinic of Neurology, Goethe University, Frankfurt, Germany

1045 Insular Glx is Associated with Resting Functional Connectivity to Pain Modulatory Brain Regions
Richard Harris[1], Jieun Kim[2], Pia Sundgren[1], Daniel Clauw[1], Vitaly Napadow[2]
[1]University of Michigan, Ann Arbor, MI, [2]Massachusetts General Hospital, Charlestown, MA

1046 Resting state alterations in irritable bowel syndrome (IBS)
Kirsten Tillisch[1], Mats Larsson[2], Lisa Kilpatrick[3], Maria Engstrom[4], Bruce Naliboff[5], Peter Lundberg[6], Jennifer Labus[7], Susanna Walter[2], Emeran Mayer[5]
[1]UCLA, Los Angeles, United States, [2]Institute of Clinical and Experimental Medicine, University of Linkoping, Linkoping, Sweden, [3]UCLA Center for Neurobiology of Stress, Los Angeles, United States, [4]Center for Medical Image Science and Visualization, University of Linkoping, Linkoping, Sweden, [5]Center for Neurobiology of Stress, UCLA, Los Angeles, CA, [6]Department of Radiation Physics, Linkoping, Sweden, [7]LOS ANGELES, United States

1047 Graded motor imagery and changes in activity of the pain matrix
Andrea Daniela Walz[1], Taras Usichenko[2], G. Lorimer Moseley[3,4], Martin Lotze[1]
[1]Functional Imaging, Institute for Diagnostic Radiology and Neuroradiology, University of Greifswald, Greifswald, Germany, [2]Department of Anesthesiology and Intensive Care Medicine, University of Greifswald, Greifswald, Germany, [3]University of South Australia, Adelaide, Australia, [4]Neuroscience Research Australia, Sydney, Australia

1048 Placebo analgesia elicits sustained changes in pain intensity processing
Lauren Atlas[1], Tor Wager[2]
[1]Columbia University, New York, United States, [2]University of Colorado Psychology, Boulder, CO

1049 Linear and nonlinear brain response to deep tissue pain in core regions of the default mode network
Marco Loggia[1,2,3], Robert Edwards[2,4], Jieun Kim[3], Mark Vangel[3], Ajay Wasan[2,4], Randy Gollub[1,3], Richard Harris[5], Kyungmo Park[6], Vitaly Napadow[3,2]
[1]Dept of Psychiatry, Massachusetts General Hospital, Harvard Medical School, Boston, MA, [2]Dept of Anesthesiology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, [3]Martinos Center for Biomedical Imaging, MGH, Boston, MA, [4]Dept of Psychiatry, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, [5]Chronic Pain and Fatigue Research Center, Department of Anesthesiology, University of Michigan, Ann Arbor, MI, [6]Department of Biomedical Engineering, Kyunghee University, Yongin, Korea, Republic of

1050 A CORE NETWORK IN CENTRAL PAIN PROCESSING
Franco Cauda[1], Martina Amanzio[2], Sergio Duca[3], Elisabetta Geda[1], Giuliano Geminiani[1], Diana Torta[2], Katiuscia Sacco[4], Federico D'Agata[1]
[1]CCS fMRI, University of Turin, Turin, Italy, [2]University of Turin, Turin, Italy, [3]CCS fMRI, Koelliker Hospital, Turin, Italy, [4]CCS fMRI, University of Turin, Torino, Italy

1051 The cortical rhythms of chronic back pain
Marwan Baliki[1], Alex Baria[1], A Vania Apkarain[1]
[1]Northwestern University, Chicago, IL

1052 Abnormal gray matter aging in patients with temporomandibular disorder
Massieh Moayedi[1,2], Irit Weissman-Fogel[3], Tim Salomons[4], Michael Goldberg[5], Bruce Freeman[5], Howard Tenenbaum[5], Karen Davis[6]
[1]University of Toronto, Toronto, Ontario, Canada, [2]Toronto Western Research Institute, University Health Network, Toronto, Ontario, Canada, [3]Toronto Western Research Institute, University Health Network, Toronto, Ontario, [4]Toronto Western Research Institute, University Health Network, Toronto, Canada, [5]Mount Sinai Hospital Dental Clinic, Toronto, Ontario, [6]Toronto Western Hospital, University Health Network, Toronto, Canada

1053 Cortical correlates of temperature and pain sensitivity
Nathalie Erpelding[1], Massieh Moayedi[2], Karen Davis[3]
[1]Toronto Western Research Institute, Toronto, Canada, [2]University of Toronto, Toronto, Canada, [3]Toronto Western Hospital, Toronto, Canada

1054 Arterial spin labeling and functional connectivity study on endogenous low back pain
Jian Kong[1], Alexandra Cheetham[1], Rita Loiotile[1], Karleyton Evans[2], Karin Jensen[2], Marco Loggia[2], Vitaly Napadow[2], Robert Edwards[3], Ajay Wasan[3], Randy Gollub[2]
[1]Massachusetts General Hospital, Charlestown, MA, [2]Massachusetts General Hospital, Charlestown, United States, [3]Brigham & Women's Hospital, Boston, United States

1055 Spatial attention differentially modulates oscillatory activity associated with pain – An MEG study
Elisabeth May[1], Markus Butz[1,2], Nina Kahlbrock[1], Meike Brenner[1], Alfons Schnitzler[1]
[1]Institute of Clinical Neuroscience and Medical Psychology, Heinrich-Heine-University, Düsseldorf, Germany, [2]University College London Institute of Neurology, London, United Kingdom

1056 MRI versus hemodynamic score regressions yield CNS evidence for altered autonomic function in CFS
Leighton Barnden[1], Benjamin Crouch[1], Richard Burnet[2], Richard Kwiatek[3]
[1]The Queen Elizabeth Hospital, Adelaide, Australia, [2]Royal Adelaide Hospital, Adelaide, Australia, [3]Lyell McEwin Hospital, Adelaide, Australia

1057 Effects of menstrual cycle phase on task-directed attention during pain processing
Timothy Meeker[1], Dieuwke Veldhuijzen[2], Michael Keaser[1], Rao Gullapalli[3], Joel Greenspan[1]
[1]Department of Neural and Pain Sciences, University of Maryland, Baltimore, USA, [2]Rudolf Magus Institute of Neuroscience, University Medical Center Utrecht, Utrecht, Netherlands, [3]Department of Diagnostic Radiology, University Of Maryland, Baltimore, USA

1058 Placebo modulates regional power of BOLD oscillations in chronic low back pain patients
Javeria Hashmi[1], Alex Baria[1], Marwan Baliki[1], Vania Apkarian[1]
[1]Northwestern University, Chicago, IL

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1059 **MVPA for drug discovery: single FMRI session discrimination of low dose remifentanil and placebo**
Eugene Duff[1], Richard Wise[2], Frederick Wilson[3], Kyle Pattinson[4], Giandomenico Iannetti[5], Mark Woolrich[6], Stephen Smith[4]
[1]FMRIB Centre, Oxford, United Kingdom, [2]Cardiff University, Cardiff, United Kingdom, [3]Pfizer, Sandwich, Kent, [4]FMRIB Centre, University of Oxford, Oxford, United Kingdom, [5]Department of Neuroscience, Physiology and Pharmacology, University College London, London, United Kingdom, [6]University of Oxford, Oxford, United Kingdom

1060 **The effect of psychopathic traits on somatosensory excitability while observing pain in others**
Louis-Alexandre Marcoux[1,2], Pierre-Emmanuel Michon[3], Julien Voisin[3,4], Sophie Lemelin[2,1], Philip Jackson[1,2,3]
[1]École de Psychologie, Université Laval, Québec, Canada, [2]CRULRG, Québec, Canada, [3]CIRRIS, Québec, Canada, [4]Département de réadaptation, Université Laval, Québec, Canada

1061 **MRI vs CFS severity score regressions detect midbrain, internal capsule and pre-frontal involvement**
Benjamin Crouch[1], Leighton Barnden[1], Richard Kwiatek[2], Richard Burnet[3]
[1]The Queen Elizabeth Hospital, Adelaide, Australia, [2]Lyell McEwin Hospital, Adelaide, Australia, [3]Royal Adelaide Hospital, Adelaide, Australia

1062 **White Matter Mechanisms of Helplessness in Chronic Pain**
Tim Salomons[1], Massieh Moayedi[2], Irit Weissman-Fogel[3], Bruce Freeman[4], Michael Goldberg[4], Howard Tenenbaum[4], Karen Davis[5]
[1]Toronto Western Research Institute, Toronto, Canada, [2]University of Toronto, Toronto, Canada, [3]Toronto Western Research Institute, University Health Network, Toronto, Ontario, [4]Mount Sinai Hospital Dental Clinic, Toronto, Ontario, [5]Toronto Western Hospital, Toronto, Canada

1063 **Meta-analysis of brain activity differences between esophageal, gastric and rectal distention**
James Sheehan[1], Braden Kuo[1], Vitaly Napadow[1]
[1]Massachusetts General Hospital, Boston, MA

1064 **Multimodal imaging of cortical and white matte abnormalities in neuropathic pain after spinal cord**
Eun Jin Yoon[1], Yu Kyeong Kim[1], Hyoung Ik Shin[2], Sang Eun Kim[1]
[1]Department of Nuclear Medicine, Seoul National University College of Medicine, Seoul, Korea, Republic of, [2]Department of Rehabilitation, Seoul National University Bundang Hospital, Gyeonggi, Korea, Republic of

1065 **Grey matter reduction in chronic bowel disease: a voxel based morphometric study**
Francesca Benuzzi[1], Alessandro Agostini[2,3], Chiara Leoni[4], Valentina Farinelli[1], Nicola Filippini[5], Massimo Campieri[3], Paolo Nichelli[1]
[1]Dip. di Neuroscienze, Università di Modena e Reggio Emilia, Modena, Italy, [2]Dip. di Psicologia, Università di Bologna, Bologna, Italy, [3]Dip. di Medicina Clinica, Università di Bologna, Bologna, Italy, [4]Di. di Radiologia, Università di Bologna, Bologna, Italy, [5]Dep. of Psychiatry and FMRIB Centre, University of Oxford, Oxford, United Kingdom

1066 **Standard and individually determined thermal pain stimuli induce similar brain activations**
Gerbrich van den Bosch[1], Judy van Hemmen[2], Tonya White[3], Dick Tibboel[1], Jeroen Peters[4], Jos van der Geest[2]
[1]Erasmus MC-Sophia, Rotterdam, Netherlands, [2]Erasmus MC, Rotterdam, Netherlands, [3]Erasmus Medical Centre, Rotterdam, Netherlands, [4]HAN University of Applied Sciences, Arnhem , Netherlands

1067 **Nociceptive long-term habituation in chronic low back pain and depression**
Rea Rodriguez-Raecke[1], Kristin Ihle[2], Christian Otte[2], Christoph Muhtz[2], Arne May[3]
[1]Uke, Germany, [2]University Medical Center Hamburg Eppendorf, Hamburg, Germany, [3]Dept. of Systems Neuroscience, 20246 Hamburg, Germany

Perception and Attention

Perception: Tactile/Somatosensory

1068 **Pre-stimulus oscillatory activity predicts subjective perception of tactile simultaneity**
Joachim Lange[1], Johanna Halacz[1], Hanneke van Dijk[1], Nina Kahlbrock[2], Alfons Schnitzler[3]
[1]Institute of Clinical Neuroscience and Medical Psychology, HHU Düsseldorf, Düsseldorf, Germany, [2]Institute of Clinical Neuroscience and Medical Psychology, Düsseldorf, Germany, [3]Institute of Clinical Neuroscience and Medical Psychology, Heinrich-Heine-University, Düsseldorf, Germany

1069 The negative BOLD signal is associated with perfusion decreases in the human somatosensory cortex
Katharina Schaefer[1,2], Felix Blankenburg[3,4], Ron Kupers[5,6], Ian Law[7], Martin Lauritzen[5,8], Henrik Larsson[1,2,9]
[1]Functional Imaging Unit, Glostrup Hospital, University of Copenhagen, Glostrup, Denmark, [2]Department of Clinical Physiology and Nuclear Medicine, Glostrup Hospital, University of Copenhagen, Glostrup, Denmark, [3]Department of Neurology, Charité - Universitätsmedizin, Berlin, Germany, [4]Bernstein Center for Computational Neuroscience, Berlin, Germany, [5]Department of Neuroscience and Pharmacology, The Panum Institute, University of Copenhagen, Copenhagen, Denmark, [6]PET Unit, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark, [7]PET and Cyclotron Unit, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark, [8]Department of Clinical Neurophysiology, Glostrup Hospital, Glostrup, Denmark, [9]Department of Radiology, Glostrup Hospital, University of Copenhagen, Glostrup, Denmark

1070 Cortical Alpha and Beta Oscillations during Somatosensory Stimulation
Emily Ruzich[1], Thomas Witzel[2], Norman Kettner[3], Matti Hämäläinen[2], Vitaly Napadow[2], RUPALI DHOND[2]
[1]Harvard Medical School - MGH; Martinos Center for Biomedical Imaging, Charlestown, MA, USA, [2]Harvard Medical School - MGH, Martinos Center for Biomedical Imaging, Charlestown, MA, USA, [3]Logan College of Chiropratic, Chesterfield, MO, USA

1071 Recurrent neural processing and somatosensory awareness
Ryszard Auksztulewicz[1], Felix Blankenburg[2,3], Bernhard Spitzer[2,3]
[1]Berlin School of Mind and Brain, Humboldt-Universität zu Berlin, Berlin, Germany, [2]Department of Neurology, Charité - Universitätsmedizin, Berlin, Germany, [3]Bernstein Center for Computational Neuroscience, Berlin, Germany

1072 Power and phase of ongoing mu-oscillation at stimulus onset differentially influence the SEP
Till Nierhaus[1], Jens Steinbrink[1], Arno Villringer[2]
[1]Charité Universitätsmedizin Berlin, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

1073 Functional MRI of intra-digital topographic maps in the human primary somatosensory cortex
Renate Schweizer[1], Meike Annika Schweisfurth[1], Jens Frahm[1]
[1]Biomedizinische NMR Forschungs GmbH am Max-Planck-Institut fuer biophysikalische Chemie, Goettingen, Germany

1074 Neural correlates of tactile frequency discrimination: a MEG study
Gaetan Sanchez[1,2], Sebastien Daligault[3], Emmanuel Maby[1,2], Romain Bouet[1,2], Olivier Bertrand[1,2], Jérémie Mattout[1,2]
[1]INSERM U1028, CNRS UMR5292, Lyon Neuroscience Research Center, Brain Dynamics and Cognition Team, Lyon, F-69500, France, [2]University Lyon 1, Lyon, France, [3]CERMEP, Lyon, F-69500, France

1075 Cortical adaptation is correlated to SI digit somatotopy in Carpal Tunnel Syndrome
Yumi Maeda[1,2], Jieun Kim[1], Jameson Holden[3], Stephan Cina[1], Ang Li[1], Cristina Malatesta[4], Pia Hugus[1], Leslie Morse[4], Mark Tommerdahl[3], Norman Kettner[2], Joseph Audette[5], Vitaly Napadow[1,2]
[1]Martinos Center for Biomedical Imaging, Department of Radiology, Charlestown, MA, [2]Logan College of Chiropratic, Department of Radiology, Chesterfield, MO, [3]University of North Carolina School of Medicine, Department of Biomedical Engineering, Chapel Hill, NC, [4]Spaulding Rehabilitation Hospital, Department of Physical Medicine and Rehabilitation, Medford, MA, [5]Harvard Vanguard Medical Associates, Atrius Health, Department of Pain Medicine, Boston, MA

1076 FMRI Indicates Consistent Intra-digit Topography in the Little But Not the Index Finger of Human SI
Meike Annika Schweisfurth[1,2], Renate Schweizer[1], Jens Frahm[1]
[1]Biomedizinische NMR Forschungs GmbH am Max-Planck-Institut fuer biophysikalische Chemie, Goettingen, Germany, [2]Cognitive Neuroscience Laboratory, German Primate Center, Goettingen, Germany

1077 Modulation of somatosensory evoked fields from SII by interfering stimuli
Manyoel Lim[1], June Sic Kim[2], Chun Kee Chung[3]
[1]Seoul National University Hospital, Seoul, Korea, Republic of, [2]Seoul National University Hospital, Seoul, [3]MEG center, Seoul National University Hospital, Seoul, Korea, Republic of

1078 Between and within site variability in a multicenter fMRI study
Jakob Rath[1,2], Moritz Wurnig[1,2], Nikolaus Klinger[1,2], Ilse Höllinger[1,2], Alexander Geissler[1,2], Markus Aichhorn[3], Thomas Foki[1,2], Martin Kronbichler[4], Janpeter Nickel[5], Christian Siedentopf[6], Wolfgang Staffen[4], Michael Verius[6], Stephan Felber[7], Stefan Golaszewski[3], Florian Koppelstätter[6], Rudiger Seitz[5], Roland Beisteiner[1,2]
[1]Study Group Clinical fMRI, Department of Neurology, Medical University of Vienna, Vienna, Austria, [2]MR Center of Excellence, Medical University of Vienna, Vienna, Austria, [3]2Department of Neurology, Christian Doppler Clinic and Center for Neurocognitive Research, Paracelsu, Salzburg, Austria, [4]Department of Neurology, Christian Doppler Clinic and Center for Neurocognitive Research, Paracelsu, Salzburg, Austria, [5]Department of Neurology, University Hospital Düsseldorf, Germany, Duesseldorf, Germany, [6]Department of Radiology, Subdivision Neuroradiology, Medical University of Innsbruck, Innsbruck, Austria, [7]Institute for Diagnostic Radiology, Stiftungsklinikum Mittelrhein, Koblenz, Germany

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1079 **Functional MRI finding by Proprioceptive Input in Patients with Thalamic Hemorrhage**
mi-young Lee[1], Sung Ho Jang[2], Sang Seok yeo[3]
[1]Daegu Haany University, Daegu, Republic of Korea, [2]Yeungnam University, Daegu, Korea, Republic of, [3]Daegu University, Daegu, Korea, Republic of

1080 **Neural Correlates of Defense and Orienting Response to Acupuncture Stimulation: an er-fMRI study**
Kyungmo Park[1], Jeungchan Lee[1], Jieun Kim[2], Stephan Cina[2], Yumi Maeda[2], Riccardo Barbieri[2], Norman Kettner[3], Vitaly Napadow[2]
[1]Kyung Hee University, Yongin, Korea, Republic of, [2]Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Boston, MA, United States, [3]Logan College of Chiropratic, Chesterfield, United States

1081 **Neural Correlates of Spatial Encoding of Sensory Stimuli in Healthy Subjects, an fMRI Study**
Erick Pasaye[1,2], Sarael Alcauter[3], Roberto Mercadillo[1], Clemens Bauer[4], Arturo Ramirez Mayorga[5], Juan Ortiz[6], Fernando Barrios[7]
[1]Universidad Nacional Autonoma de Mexico, Instituto de Neurobiologia, Juriquilla, Queretaro, Mexico., [2]Instituto Nacional de Neurologia y Neurocirugia MVS, Mexico DF, Mexico, [3]National Institute of Psychiatry, Mexico, Mexico D.F., Mexico, [4]Universidad Nacional Autonoma de Mexico, Instituto de Neurobiologia, Juriquilla, Querétaro, Mexico, [5]National Institute of Rehabilitation, Mexico D.F., Mexico, [6]Universidad Nacional Autonoma de Mexico, Instituto de Neurobiologia, Juriquilla, Queretaro, Mexico, [7]Universidad Nacional Autonoma de Mexico, Juriquilla, Queretaro, Mexico

Perception and Attention

Perception: Visual

1082* **Columnar organization for motion directions in human MT complex revealed by high-resolution fMRI, (O-Th3)**
Mauro Costagli[1,2], Pei Sun[1], Kenichi Ueno[1], Xiaohong Wan[1], Justin Gardner[1], R. Allen Waggoner[1], Keiji Tanaka[1], Kang Cheng[1]
[1]RIKEN Brain Science Institute, Wakoshi, Saitama, Japan, [2]University of Pisa, Pisa, Italy

1083* **Disentangling Visual Imagery and Perception of Real-World Objects across the Ventral Visual Cortex, (O-Th3)**
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[1]LBC/NIMH/NIH, Bethesda, MD, United States

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[1]University of Pennsylvania, Philadelphia, United States, [2]Children's Hospital of Philadelphia, Philadelphia, PA

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[1]Children's Hospital of Philadelphia, Philadelphia, United States, [2]University of Wisconsin-Madison, Madison, United States, [3]Temple University, Philadelphia, PA, [4]Children's Hospital of Philadelphia, Philadelphia, PA

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[1]Carnegie Mellon University, Pittsburgh, PA

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[1]Utrecht University, Utrecht, Netherlands, [2]Rudolf Magnus Institute of Neuroscience, UMC Utrecht, Utrecht, Netherlands, [3]University of Amsterdam, Amsterdam, Netherlands

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[1]MGH/Harvard Medical School, Charlestown, MA, [2]Berlin School of Mind and Brain, Berlin, Germany

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[1]Columbia University, New York, NY

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[1]UMR6232, Caen, Paris, France, [2]Mines ParisTech, Paris, France, [3]CHU de Caen, UMR 6232, Caen, France

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Tom de Graaf[1], Alexander Sack[2]
[1]Department of Cognitive Neuroscience, Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, the Netherlands, [2]Department of Cognitive Neuroscience, Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, Netherlands

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[1]University of Glasgow, Glasgow, United Kingdom, [2]Glasgow, United Kingdom

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[1]UMR6232, Paris, Caen, France, [2]Mines ParisTech, Paris, France, [3]EA2027, Paris, France

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[1]INSEP, Recherche, Paris, France, [2]Department of Neuroscience, Medical School, University of Geneva, Geneva, Switzerland, [3]LNC INSERM U960 DEC ENS & CENIR, Paris, France

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[1]Riken Brain Science Institute, Wako-shi, Japan, [2]The Salk Institute for Biological Studies, La Jolla, CA, [3]RIKEN Brain Science Institute, Wako-shi, Japan

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[1]Dept. Neurology, Kyoto University Graduate School of Medicine, Kyoto, Japan, [2]Graduate School of Human and Environmental Studies, Kyoto University, Kyoto, Japan, [3]Dept. Neurosurgery, Kyoto University Graduate School of Medicine, Kyoto, Japan, [4]HBRC Kyoto University School Of Medicine, Kyoto, Japan, [5]Dept. Neurosurgery, Sapporo Medical University, Sapporo, Japan

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[1]McGill University, Montreal, Quebec, [2]Montreal Neurological Institute, Montreal, Quebec

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[1]Institute of Biomedical Research in Light and Image, Coimbra, Portugal

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[1]MRC CBSU, Cambridge, United-Kingdom, [2]MRC CBSU, Cambridge, United Kingdom, [3]MRC CBSU, Cambrige, United Kingdom

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[1]Faculty of Medicine, Coimbra, Portugal, [2]Centre for Informatics and Systems, Coimbra, Portugal, [3]Maastricht, Netherlands, [4]IBILI, Coimbra, Portugal, [5]Department of Psychology, McGill University, Motreal, Canada, [6]Pontificia Universidad Catolica de Chile, Escuela de psicología, Chile, Santiago, Chile

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[1]IBILI- Faculty of Medicine, University of Coimbra, Coimbra, Portugal, [2]Department of Psychology, McGill University, Motreal, Canada

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[1]Cardiff University Brain Research Imaging Centre, Cardiff, United Kingdom, [2]Department of Experimental Psychology, University of Bristol, Bristol, United Kingdom

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[1]La Trobe University, Melbourne, Australia, [2]La Trobe University, Melbourne, Victoria, [3]Swinburne University, Melbourne, Australia, [4]La Trobe University, Melbourne, Australia

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[1]Kansei Fukushi Research Institute, Tohoku Fukushi University, Sendai, Miyagi

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[1]Department of Computer Science, University of Verona, Italy, Verona, Italy, [2]The Hamlyn Centre for Robotic Surgery, Imperial College London, London, United Kingdom

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[1]Cardiff University, Cardiff, United Kingdom

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[1]Laboratoire de Psychologie et NeuroCognition, CNRS UMR 5105, Grenoble, France, [2]Unité Fonctionnelle Vision & Cognition, Fondation Ophtalmologique Rothschild, Paris, France, [3]INSERM U836/Université Joseph Fourier - GRenoble Institut des Neurosciences, Grenoble, France

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Courtney Gray[1], Amir Tahmasebi[1], Rosanne Aleong[1], Tomas Paus[1,2,3], the IMAGEN Consortium[4]
[1]Rotman Research Institute, Baycrest, Toronto, Ontario, Canada, [2]Montreal Neurological Institute, McGill University, Montreal, Quebec, Canada, [3]School of Psychology, University of Nottingham, Nottingham, United Kingdom, [4]King's College, University of London, London, United Kingdom

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[1]National Institute of Advanced Industrial Science and Technology (AIST), Osaka, Japan

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[1]Dept of Radiology, Chonnam National University Medical School, Gwang-Ju, Republic of Korea, [2]Dept of Architectural Engineering, Chonnam National University, Gwang-Ju, Republic of Korea

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[1]Indiana Univerisity, [2]Indiana University, Bloomington, IN

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Organization for
Human Brain Mapping

5841 CEDAR LAKE ROAD, SUITE 204
MINNEAPOLIS, MN 55416 USA

www.humanbrainmapping.org
Phone: 952.646.2029
Fax: 952.545.6073
Email: info@humanbrainmapping.org