



Celebrating 20 Years

humanbrainmapping.org/OHBM2014

poster listings

OHBM 2014 Annual Meeting

June 8-12

CCH-Congress Center Hamburg

Hamburg, Germany



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Poster Category Key

Monday and Tuesday Posters

- Display Days: Your poster should be displayed on your assigned poster board on Monday and Tuesday
- Set-Up Time: Please set-up your poster from 8:00 – 9:00 am on Monday morning.
- Poster Stand-By Times:
 - Even numbered posters between #1000-2457 will stand-by and present their poster on Monday, June 9 from 12:45 – 14:45.
 - Odd numbered posters between #1000-2457 will stand-by and present their poster on Tuesday, June 10 from 12:45 – 14:45.
- Poster Reception: All Monday and Tuesday poster presenters will have a poster reception on Tuesday, June 10 from 17:00 – 18:30.
- Poster Teardown: Monday and Tuesday presenters should remove their posters by 19:30 on Tuesday night.

| Category/Sub-Category | Poster #s | Category/Sub-Category | Poster #s |
|---|-----------|---|-----------|
| DISORDERS OF THE NERVOUS SYSTEM | | EMOTION AND MOTIVATION | |
| Addictions | 1000-1053 | Emotional Learning | 1867-1881 |
| Alzheimer's Disease and Other Dementias | 1054-1127 | Emotional Perception | 1882-1929 |
| Developmental Disorders | 1128-1173 | Reward and Punishment | 1930-1969 |
| Schizophrenia and Psychotic Disorders | 1174-1263 | Sexual Behavior | 1970-1976 |
| Traumatic Brain Injury | 1264-1287 | | |
| Mood and Anxiety Disorders | 1288-1385 | IMAGING METHODS | |
| HIGHER COGNITIVE FUNCTIONS | | Anatomical MRI | 1977-2004 |
| Decision Making | 1386-1449 | BOLD fMRI | 2005-2119 |
| Executive Function | 1450-1513 | Diffusion MRI | 2120-2164 |
| Imagery | 1514-1526 | EEG | 2165-2200 |
| Music | 1527-1539 | MEG | 2201-2210 |
| Reasoning and Problem Solving | 1540-1556 | MR Spectroscopy | 2211-2223 |
| Space, Time and Number Coding | 1557-1575 | Multi-Modal Imaging | 2224-2268 |
| MODELING AND ANALYSIS METHODS | | Non-BOLD fMRI | 2269-2273 |
| Task-Independent and Resting-State Analysis | 1576-1627 | Optical Imaging/NIRS | 2274-2307 |
| Diffusion MRI Modeling and Analysis | 1628-1656 | PET | 2308-2311 |
| EEG/MEG Modeling and Analysis | 1657-1696 | | |
| Exploratory Modeling and Artifact Removal | 1697-1713 | LEARNING AND MEMORY | |
| fMRI Connectivity and Network Modeling | 1714-1851 | Implicit Memory | 2312-2315 |
| Image Registration and Computational Anatomy | 1852-1866 | Long-Term Memory (Episodic and Semantic) | 2316-2367 |
| | | Neural Plasticity and Recovery of Function | 2368-2394 |
| | | Skill Learning | 2395-2419 |
| | | Working Memory | 2420-2457 |

Poster Category Key

Wednesday and Thursday Posters

- Display Days: Your poster should be displayed on your assigned poster board on Wednesday and Thursday
- Set-Up Time: Please set-up your poster from 8:00 – 9:00 am on Wednesday morning. Do not set-up your poster Tuesday night – you must wait until Wednesday morning.
- Poster Stand-By Times:
 - Even numbered posters between #3000-4455 will stand-by and present their poster on Wednesday, June 11 from 12:45 – 14:45.
 - Odd numbered posters between #3000-4455 will stand-by and present their poster on Thursday, June 12 from 12:45 – 14:45.
- Poster Reception: All Wednesday and Thursday poster presenters will have a poster reception on Thursday, June 12 from 16:00 – 17:30.
- Poster Teardown: Wednesday and Thursday presenters should remove their poster by 18:30 on Thursday night.

| Category/Sub-Category | Poster #s |
|---|-----------|
| BRAIN STIMULATION METHODS | |
| Deep Brain Stimulation | 3000-3009 |
| Direct Electrical/Optogenetic Stimulation | 3010-3013 |
| TDCS | 3014-3038 |
| TMS | 3039-3066 |
| DISORDERS OF THE NERVOUS SYSTEM | |
| Autism | 3067-3104 |
| Epilepsy | 3105-3162 |
| Obsessive-Compulsive Disorder and Tourette Syndrome | 3163-3175 |
| Other Disorders | 3176-3253 |
| Parkinson's Disease and Movement Disorders | 3254-3311 |
| Sleep Disorders | 3312-3314 |
| Stroke | 3315-3361 |
| GENETICS | |
| Genetic Association Studies | 3362-3398 |
| Genetic Modeling and Analysis Methods | 3399-3413 |
| Neurogenetic Syndromes | 3414-3422 |

| Category/Sub-Category | Poster #s |
|--|-----------|
| MODELING AND ANALYSIS METHODS | |
| Bayesian Modeling | 3423-3431 |
| Classification and Predictive Modeling | 3432-3475 |
| Motion Correction and Preprocessing | 3476-3501 |
| Multivariate modeling | 3502-3523 |
| Other Methods | 3524-3550 |
| PET Modeling and Analysis | 3551-3556 |
| Segmentation and Parcellation | 3557-3599 |
| Univariate Modeling | 3600-3612 |
| INFORMATICS | |
| Atlases | 3613-3617 |
| Databasing and Data Sharing | 3618-3632 |
| Pipelines | 3633-3642 |
| LANGUAGE | |
| Language Acquisition | 3643-3656 |
| Language Comprehension and Semantics | 3657-3693 |
| Reading and Writing | 3694-3711 |
| Speech Perception | 3712-3729 |
| Speech Production | 3730-3746 |

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Poster Category Key

Wednesday and Thursday Posters, continued

| Category/Sub-Category | Poster #s | Category/Sub-Category | Poster #s |
|---|-----------|---|-----------|
| MOTOR BEHAVIOR | | PHYSIOLOGY, METABOLISM AND NEUROTRANSMISSION | |
| Brain Machine Interface | 3747-3756 | Cerebral Metabolism and Hemodynamics | 4211-4215 |
| Mirror System | 3757-3765 | Neurophysiology of Imaging Signals | 4216-4227 |
| Motor Planning and Execution | 3766-3795 | Pharmacology and Neurotransmission | 4228-4232 |
| Visuo-Motor Functions | 3796-3806 | | |
| NEUROANATOMY | | SOCIAL NEUROSCIENCE | |
| Anatomy and Function | 3807-3837 | Self Processes | 4233-4248 |
| Brain Networks | 3838-3874 | Social Cognition | 4249-4305 |
| Cortical Anatomy and Segregation | 3875-3895 | Social Interaction | 4306-4340 |
| Subcortical Structures | 3896-3909 | | |
| White Matter Anatomy, Fiber Pathways and Connectivity | 3910-3947 | LIFESPAN DEVELOPMENT | |
| PERCEPTION AND ATTENTION | | Aging | 4341-4413 |
| Attention: Auditory/Tactile/Motor | 3948-3959 | Normal Brain Development: Fetus to Adolescence | 4414-4455 |
| Attention: Visual | 3960-3990 | | |
| Chemical Senses: Olfaction, Taste | 3991-3995 | | |
| Consciousness and Awareness | 3996-4018 | | |
| Perception: Auditory/Vestibular | 4019-4045 | | |
| Perception: Multisensory and Crossmodal | 4046-4073 | | |
| Perception: Pain and Visceral | 4074-4111 | | |
| Perception: Tactile/Somatosensory | 4112-4133 | | |
| Perception: Visual | 4134-4197 | | |
| Sleep and Wakefulness | 4198-4210 | | |

Schedule of Poster Presentations

www4.aievolution.com/hbm1401

Monday, June 9 & Tuesday, June 10

Information listed, including author affiliations, appear as submitted.

Disorders of the Nervous System

ADDICTIONS

- 1000 REACTIVITY TO FEEDBACK ASSOCIATES WITH IMMEDIATE DECISION MAKING: CONTROLS VS. COCAINE ADDICTS**
Alfonso Barrós-Loscertales¹, Juan Bustamante¹, Patricia Rosell-Negre², Victor Costumero², Paola Fuentes Claramonte¹, Noelia Ventura-Campos³
¹Departamento de Psicología Básica, Clínica y Psicobiología, Universitat Jaume I, Castellon de la plana, Spain, ²Universitat Jaume I, Castellon, Spain, ³Department of Psychology, University Jaume I, Castellón de la Plana, Spain
- 1001 Transdiagnostic Investigation of Learning Mechanisms in Patients with Failure of Behavioral Control**
Andrea Reiter¹, Lorenz Deserno^{2,1}, Tilmann Wilbertz¹, Zsuzsika Sjoerds¹, Hans-Jochen Heinze^{3,4}, Florian Schlagenhauf^{2,1}
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Charité Universitätsmedizin Berlin, Berlin, Germany, ³University of Magdeburg, Magdeburg, Germany, ⁴Leibniz Institute for Neurobiology, Magdeburg, Germany
- 1002 Neurofeedback in patients with alcohol use disorder: a real-time fMRI study**
Susanne Karch¹, Sebastian Hümmer², Daniel Keiser³, Marco Paolini⁴, Valerie Kirsch⁵, Gabriele Koller⁶, Michael Kupka⁷, Janusch Blautzik⁸, Oliver Pogarell⁹
¹Ludwig-Maximilians-University Munich, Munich, Germany, ²Department of Psychiatry and Psychotherapy, LMU Munich, Munich, Germany, ³Ludwig Maximilians University Munich, Institute of Clinical Radiology, Munich, Germany, ⁴Institute of Clinical Radiology, Ludwig-Maximilian University Munich, Munich, Germany, ⁵Neurology LMU Munich, Munich, Germany, ⁶Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University Munich, Munich, Germany, ⁷Institute for Clinical Radiology, Ludwig-Maximilian University, Munich, Germany, ⁸N/A, 80336 München, Germany, ⁹Departement of Psychiatry and Psychotherapy, Ludwig-Maximilian University, Munich, Germany
- 1003 Memory retrieval of smoking images induces insular activation in nicotine dependent individuals**
Amy Janes¹, Robert Ross², Stacey Farmer¹, Blaise Frederick¹, Lisa Nickerson¹, Scott Lukas¹, Chantal Stern³
¹McLean Hospital, Harvard Medical School, Belmont, United States, ²University of New Hampshire, Durham, NH, ³Boston University, MGH, Boston, MA
- 1004 Neural correlates of aversive conditioning in regular cocaine users**
A. Kaag¹, Judith Homberg², Nina Levar¹, Guido van Wingen³, Wim van den Brink⁴, L. Reneman¹
¹Academic Medical Center, Amsterdam, Netherlands, ²Radboud University, Nijmegen, Netherlands, ³Academic Medical Center Amsterdam, Amsterdam, Netherlands, ⁴Department of Psychiatry, Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands
- 1005 White matter microstructure abnormalities in the fornix and cingulum of cigarette smokers**
Audrey Verde¹, Vicki Chanon¹, Mihye Ahn¹, Emily Cerciello¹, Hongtu Zhu¹, Martin Styner¹, Charlotte Boettiger¹
¹University of North Carolina at Chapel Hill, Chapel Hill, NC, United States
- 1006 Response inhibition in recreational stimulant users: an fMRI study**
Sharon Morein-Zamir¹, P. Simon Jones², Edward Bullmore³, Trevor Robbins¹, Karen Ersche¹
¹University of Cambridge, Cambridge, United Kingdom, ²University of Cambridge, Cambridge, United Kingdom, ³Brain Mapping Unit, Department of Psychiatry, University of Cambridge, Cambridge, United Kingdom
- 1007 Cortical thickness abnormalities in pathological gambling: neural markers of vulnerability?**
Yansong Li^{1,2}, Guillaume Sescousse^{1,2,3}, Philippe Domenech^{1,2}, Guillaume Barbatat^{1,2}, Jean-Claude Dreher^{1,2}
¹Reward and Decision-Making Group, Cognitive Neuroscience Center, CNRS UMR 5229, Bron, France, ²Université Claude Bernard Lyon 1, Lyon, France, ³Current address: Radboud University Nijmegen, Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands

- 1008 FMRI Bold Response to Alcohol Cues in Abstinent Alcoholics**
Jihye noh¹, Chaejoon Cheong², Mi-Sook Park³, Jin-Hun Sohn⁴
¹KBSI, ochang, Korea, Republic of, ²Korea Basic Science Institute, Ochang, Korea, Republic of, ³Department of Psychology, Institute for Brain Research, Chungnam National University, dae jeon, Korea, Republic of, ⁴Chungnam National University, Daejeon, Republic Of Korea
- 1009 Cue-induced striatal activity in frequent cannabis users predicts problem severity three years later**
Janna Cousijn¹, Wilhelmina Vingerhoets², Laura Koenders³, Reinout Wiers⁴, Anna Goudriaan³, Therese van Amelsvoort⁵, Lieuwe de Haan³, Wim van den Brink³
¹Department of Developmental and Experimental Psychology, Utrecht University, Utrecht, Netherlands, ²Academic Medical Centre, University of Amsterdam, Amsterdam, Netherlands, ³Department of Psychiatry, Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands, ⁴Dep. of Psychology, University of Amsterdam, Amsterdam, Netherlands, ⁵Department of Psychiatry and Psychology, Maastricht University, Maastricht, Netherlands
- 1010 Hippocampus goes Depression: Structural Correlates of Negative Mood States after Smoking Cessation**
Franziska Wuttig¹, Nils Kroemer¹, Caroline Burrasch¹, Michael Smolka¹
¹Technische Universität Dresden, Dresden, Germany
- 1011 The progression of alcohol dependence and neural correlates of habits**
Zsuzsika Sjoerds¹, Wim van den Brink², Sanne de Wit³, Aartjan Beekman⁴, Brenda Penninx⁴, Dick Veltman⁴
¹Group Schlagenhauf, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Department of Psychiatry, Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands, ³Department of Clinical Psychology and Cognitive Science Center Amsterdam, University of Amsterdam, Amsterdam, Netherlands, ⁴Department of Psychiatry, VU University Medical Center, Amsterdam, Netherlands
- 1012 Hypothalamic response to food cues is altered in smokers**
Ying Lee¹, Nils Kroemer¹, Franziska Wuttig¹, Michael Smolka¹
¹Technische Universität Dresden, Dresden, Germany
- 1013 The Effect of Smoking on Subcortical Shape and Volume**
Sooyun Cho¹, Jae Hyun Yoo¹, Taekeun Yoon¹, Jeewook Choi², bum seok Jeong³
¹Graduate school of medical science and engineering, KAIST, Daejeon, Korea, Republic of, ²Dept. of Psychiatry, Catholic University, Daejeon St. Mary's Hospital, Daejeon, Korea, Republic of, ³Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of
- 1014 Connectivity patterns associated with heroin cues in long-term abstinent heroin users: An fMRI study**
Yu Lei¹, Tianye Zhai¹, Lubin Wang¹, Yongcong Shao¹, Feng Zou¹, Shuwen Tan¹, Xiao Jin¹, Zheng Yang¹
¹Beijing Institute of Basic Medical Sciences, Beijing, China
- 1015 Oleoylethanolamide modulates human neural responses to food stimuli in obesity**
Emanuel Schwarz¹, Jan Malte Bumb¹, Martin Grosshans¹, F Markus Leweke¹, Cathrin Rohleder¹, Carola Schaefer¹, Christian Vollmert¹, Sabine Vollstädt-Klein¹, Heike Tost¹, Andreas Meyer-Lindenberg¹, Falk Kiefer²
¹Central Institute of Mental Health, Mannheim, Germany, ²Central Institute of Mental Health, ZI Mannheim, Mannheim, Germany
- 1016 Altered Value-based Intrinsic Network Exists in Heroin Addicts Even After Three Years' Abstinence**
Tianye Zhai¹, Lubin Wang¹, Yu Lei¹, Feng Zou¹, Shuwen Tan¹, Yongcong Shao¹, Enmao Ye¹, Zheng Yang¹
¹Beijing Institute of Basic Medical Sciences, Beijing, China
- 1017 Mapping ventral and dorsal striatal connectivity in cocaine abstinent dependent subjects**
Oren Contreras-Rodríguez¹, Natalia Albein-Urios¹, Jose Cesar Perales², José Miguel Martínez-González³, Raquel Vilar-López¹, Maria Jose Fernández-Serrano⁴, Oscar Lozano-Rojas⁵, Juan Verdejo-Roman¹, Antonio Verdejo-Garcia¹
¹Department of Clinical Psychology and Institute of Neuroscience F. Olóriz, University of Granada, Granada, Spain, ²Department of Experimental Psychology, University of Granada, Granada, Spain, ³Centro Provincial de Drogodependencias. Diputación de Granada, Granada, Spain, ⁴School of Psychology. Universidad de Jaén, Jaén, Spain, ⁵School of Psychology, Universidad de Huelva, Huelva, Spain

- 1018 Neural activity during the “n-back” working memory task predicts relapse risk in alcohol dependence**
Katrin Charlet¹, Anne Beck², Anne Jorde³, Lioba Wimmer⁴, Sabine Vollstädt-Klein⁵, Jürgen Gallinat⁶, Henrik Walter⁷, Falk Kiefer⁸, Andreas Heinz⁶
¹Dept. of Psychiatry and Psychotherapy, CCM, Charité-Universitätsmedizin Berlin, Berlin, Germany, ²Dept. of Psychiatry and Psychotherapy, CCM, Charité — Universitätsmedizin Berlin, Berlin, Germany, ³Department of Addictive Behavior and Addiction Medicine, Central Institute of Mental Health, Mannheim, Germany, ⁴Universitätsklinikum Bonn, Department of Medical Psychology, Zentrum für Nervenheilkunde, Bonn, Germany, ⁵Central Institute of Mental Health, Mannheim, Germany, ⁶Dept. of Psychiatry and Psychotherapy, CCM, Charité — Universitätsmedizin Berlin, Berlin, Germany, ⁷Division of Mind and Brain Research, Charité-Universitätsmedizin Berlin, Berlin, Germany, ⁸Central Institute of Mental Health, ZI Mannheim, Mannheim, Germany
- 1019 Decreased volumes of the basolateral amygdala precede escalating amphetamine type stimulant use**
Benjamin Becker¹, Daniel Wagner², Philip Koester², Marc Tittgemeyer³, Rene Hurlmann¹, Keith Kendrick⁴, Euphrosyne Gouzoulis-Mayfrank⁵, Joerg Daumann²
¹University of Bonn, Bonn, Germany, ²University of Cologne, Cologne, Germany, ³Max Planck Institute for Neurological Research, Cologne, Germany, ⁴Key Laboratory for Neuroinformation, School of Life Science and Technology, University of Electronic, Chengdu, China, ⁵LVR Clinics Cologne, Cologne, Germany
- 1020 Evidence for Altered Interaction between Opioid and Dopamine systems in Obesity**
Lauri Tuominen¹, Jetro Tuulari¹, Henry Karlsson¹, Jussi Hirvonen¹, Jarmo Hietala², Pirjo Nuutila¹, Lauri Nummenmaa¹
¹Turku PET Centre, University of Turku and Turku University Hospital, Turku, Finland, ²Department of Psychiatry, University of Turku, Turku, Finland
- 1021 CREB-BDNF Guided Exploration of Genomic Risk for Cue-Elicited Activation in Alcohol Dependence**
Jiayu Chen¹, Kent Hutchison², Vince Calhoun³, Jessica Turner⁴, Jing Sui⁵, Jingyu Liu⁵
¹The Mind Research Network, Albuquerque, United States, ²Departments of Psychology and Neuroscience, University of Colorado, Boulder, Boulder, CO, ³The Mind Research Network and UNM, ALBUQUERQUE, NM, ⁴Georgia State University, Atlanta, United States, ⁵The Mind Research Network, Albuquerque, NM
- 1022 Neural effects of re-training alcohol approach tendencies in alcohol-dependence**
Corinde Wiers¹, Thomas Gladwin², Christine Stelzel³, Sonja Gröpper³, Andreas Heinz³, Reinout Wiers⁴, Mike Rinck², Johannes Lindenmeyer⁵, Henrik Walter³, Felix Bermpohl³
¹Berlin School of Mind and Brain, Berlin, Germany, ²Behavioural Science Institute, Radboud University Nijmegen, Nijmegen, Netherlands, ³Dept. of Psychiatry and Psychotherapy, Charité — Universitätsmedizin Berlin, Berlin, Germany, ⁴Dep. of Psychology, University of Amsterdam, Amsterdam, Netherlands, ⁵Salus Klinik, Lindow, Germany
- 1023 Lower modulation of left frontoparietal network during erotic stimuli processing in cocaine patients**
Victor Costumero¹, Juan Bustamante², Paola Fuentes Claramonte², Patricia Rosell-Negre¹, Juan Jose Llopis³, Alfonso Barrós-Loscertales²
¹Universitat Jaume I, Castellon, Spain, ²Departamento de Psicología Básica, Clínica y Psicobiología, Universitat Jaume I, Castellon de la plana, Spain, ³Universitat Jaume I, Castellon, CASTELLON
- 1024 Sensitivity to Reward: Striatal Responsivity during Reward Anticipation in Alcohol Addicted Patients**
Alena Becker¹, Martina Kirsch¹, Sabine Vollstädt-Klein¹, Falk Kiefer¹, Peter Kirsch¹
¹Central Institute of Mental Health, Medical Faculty, University of Heidelberg, Mannheim, Germany
- 1025 Altered functional connectivity related to attention in adolescents with internet gaming addiction**
Woojong Yi^{1,2}, Hyun Cho¹, Se-Jin Ryu^{1,3}, Ji-Won Chun¹, Sang-Kyu Lee⁴, Dai-Jin Kim¹
¹The Catholic University of Korea College of Medicine, Seoul, Korea, Republic of, ²Interdisciplinary Program in Cognitive Science, Seoul National University, Seoul, Korea, Republic of, ³Department of Library and Information Science, Yonsei University, Seoul, Korea, Republic of, ⁴Department of Psychiatry, Hallym University College of Medicine, Chuncheon Sacred Heart Hospital, Chuncheon, Korea, Republic of
- 1026 Altered white matter tracts in prenatal methamphetamine exposed children compared to healthy control**
Annerine Roos¹, Gaby Jones¹, Dan Stein², Kirsty Donald²
¹Stellenbosch University, Cape Town, South Africa, ²University of Cape Town, Cape Town, South Africa

- 1027 Brain Connectivity during Abstinence in a rat model of Alcoholism investigated with MEMRI and rsfMRI**
Wolfgang Weber-Fahr¹, Claudia Falfán-Melgoza¹, Marcus Meinhardt², Sandra Dieter², Santiago Canals³, Alexander Sartorius¹, Wolfgang Sommer²
¹RG Translational Imaging, Central Institute of Mental Health, University of Heidelberg, Mannheim, Germany, ²Department of Psychopharmacology, Central Institute of Mental Health, University of Heidelberg, Mannheim, Germany, ³CSIC-UMH, Instituto de Neurociencias, Sant Joan d'Alacant, Spain
- 1028 Different Grey Matter Changes in Internet Addiction from Alcohol Addiction**
Eun Jin Yoon¹, Yu Kyeong Kim², Heejung Kim², Jung-Seok Choi³
¹Department of Nuclear Medicine, Seoul National University College of Medicine, Seoul, Korea, Republic of, ²Department of Nuclear Medicine, SMG-SNU Boramae Medical Center, Seoul, Korea, Republic of, ³Department of Psychiatry, SMG-SNU Boramae Medical Center, Seoul, Korea, Republic of
- 1029 D-cycloserine facilitates extinction of mesolimbic cue-reactivity in alcoholism**
Sabine Vollstädt-Klein¹, Patrick Bach¹, Sabine Hoffmann¹, Sabine Loeber², Iris Reinhard¹, Christoph von der Goltz¹, Martina Kirsch³, Anne Jorde⁴, Rainer Spanagel¹, Karl Mann¹, Falk Kiefer⁵
¹Central Institute of Mental Health, Mannheim, Germany, ²Ruhr-University Bochum, Bochum, Germany, ³Central Institute of Mental Health, Mannheim, Germany, ⁴Department of Addictive Behavior and Addiction Medicine, Central Institute of Mental Health, Mannheim, Germany, ⁵Central Institute of Mental Health, ZI Mannheim, Mannheim, Germany
- 1030 Episodic Future Thinking in Pathological Gambling**
Antonius Wiehler¹, Stephan Miedl², Jan Peters^{3,4}
¹Department of Systems Neuroscience, University-Medical Center Hamburg-Eppendorf, Hamburg, Germany, ²Department of Psychology, University of Salzburg, Salzburg, Austria, ³Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ⁴Helen Wills Neuroscience Institute, University of California, Berkeley, CA
- 1031 Linking impulsivity and habitual behavior to striatal activation**
Stephan Nebe¹, Nils Kroemer¹, Daniel Schad², Miriam Sebold², Maria Garbusow², Lucie Scholl¹, Sören Paul¹, Henrik Walter², Schlagenhauf Florian^{2,3}, Philipp Sterzer², Andreas Heinz², Quentin Huys⁴, Michael Rapp^{2,5}, Michael Smolka¹
¹Technische Universität Dresden, Dresden, Germany, ²Charité Universitätsmedizin Berlin, Berlin, Germany, ³Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ⁴ETH Zürich and University of Zürich, Zürich, Switzerland, ⁵University of Potsdam, Potsdam, Germany
- 1032 Behavioral and neuronal modulation of nicotine craving by transcranial magnetic stimulation**
Juergen Pripp¹, Livia Tomova¹, Ronald Sladky², Christian Windischberger³, Rupert Lanzenberger⁴, Claus Lamm¹
¹SCAN-Unit, Faculty of Psychology, University of Vienna, Vienna, Austria, ²Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria, ³MR Center, Medical University of Vienna, Vienna, Austria, ⁴Medical University of Vienna, Vienna, Austria
- 1033 Whole brain functional connectivity reliably identifies internet addiction disorder from controls**
Qiongmin Ma¹, Longfei Su², Hui Shen³, Dewen Hu⁴
¹National university of defense technology, Changsha, China, ²National University of Defense Technology, Changsha, China, ³College of Mechatronics and Automation, National University of Defense Technology, Changsha, Hunan, China, ⁴National University of Defense Technology, Changsha, Hunan
- 1034 Sex-related Resting State Brain Function in Cigarette Smokers and Links to Behavior**
Adriene Beltz¹, Sheri Berenbaum¹, Stephen Wilson¹
¹The Pennsylvania State University, University Park, PA
- 1035 Cortical thickness and affect perception in meth abusers with and without a history of psychosis**
Anne Uhlmann¹, Jonathan Ipser¹, Katya Mauff², Don Wilson¹, Dan Stein¹
¹Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa, ²Department of Statistical Sciences, University of Cape Town, Cape Town, South Africa

- 1036 A computational model of prediction error in a large sample**
ILKNUR ICKE¹, Robert Whelan², Eric Artiges³, Herve Lemaitre⁴, Ruben MIRANDA³, Gareth Barker⁵, Arun Bokde⁶, Christian Büchel⁷, Patricia Conrod⁸, Herta Flor⁹, Vincent Frouin¹⁰, Juergen GALLINAT¹¹, Marie-Laure Paillère Martinot³, Penny Gowland¹², Andreas Heinz¹³, Bernd Ittermann¹⁴, Eva Loth⁸, Jean-Luc Martinot³, Frauke Nees¹⁵, Jean-Baptiste Poline¹⁰, Marcella Rietschel⁹, Trevor Robbins¹⁶, Michael Smolka¹⁷, Helene VULSER¹⁸, Gunter Schumann⁵, Brian Knutson¹⁹, Hugh Garavan²⁰
¹UNIVERSITY OF VERMONT, Burlington, United States, ²School of Psychology, Trinity College Dublin, Burlington, VT, ³UMR INSERM-CEA U1000, ORSAY, France, ⁴INSERM — CEA — Faculté de Médecine Paris Sud 11, Orsay, France, ⁵King's College London, London, United Kingdom, ⁶Trinity College Dublin, Dublin, Ireland, ⁷University Medical Center Hamburg-Eppendorf, Department of Systems Neuroscience, Hamburg, Germany, ⁸King's College London, Institute of Psychiatry, London, United Kingdom, ⁹Central Institute of Mental Health, Mannheim, Germany, ¹⁰CEA, Neurospin, Gif-sur-Yvette, France, ¹¹Department of Psychiatry and Psychotherapy, Campus Charité Mitte, Charité — Universitätsmedizin, BERLIN, Germany, ¹²University of Nottingham, Nottingham, United Kingdom, ¹³Dept. of Psychiatry and Psychotherapy, CCM, Charité — Universitätsmedizin Berlin, Berlin, Germany, ¹⁴Physikalisch-Technische Bundesanstalt, Berlin, Germany, ¹⁵CIMH, Department of Cognitive and Clinical Neuroscience, N/A, ¹⁶University of Cambridge, Cambridge, United Kingdom, ¹⁷Technische Universität Dresden, Dresden, Germany, ¹⁸Research Unit 1000, ORSAY, France, ¹⁹Stanford University, Stanford, CA, ²⁰University of Vermont, Vermont, United States
- 1037 Role of Rostral Anterior Cingulate Cortex in Adolescent Risk of Early Alcohol Use**
John VanMeter¹, Valerie Darcey¹, Brittany Eltman¹, Tomas Clarke¹, Dana Estefan¹, Benson Stevens¹, Stuart Washington¹, Emma Rose², Jane Hammond³, Diana Fishbein²
¹Georgetown University, Center for Functional and Molecular Imaging, Washington, DC, United States, ²Department of Psychiatry, University of Maryland Medical School, Baltimore, MD, United States, ³RTI International, Rockville, MD, United States
- 1038 Reduced Cortical Volume Associated with Functional Connectivity Dysfunction and Alcohol Use Severity**
Barbara Weiland¹, Amithrupa Sabbieni¹, Vince Calhoun², Robert Welsh³, Angela Bryan¹, Kent Hutchison⁴
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- 1039 Temporal dynamic changes in ACC related brain networks during early abstinence in alcoholic patients**
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- 1040 A voxel-based morphometry study of heroin abstinence**
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- 1041 Neural hyperactivation in cocaine addicts during stop signal task with reward contingencies**
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- 1042 Altered corticostriatal resting-state functional connectivity in chronic cocaine users**
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- 1043 Reduced Intra- and Inter-hemispheric Resting State Functional Connectivity in Cocaine Users**
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- 1044 Neural reward processing in alcohol dependence: a slot machine paradigm**
Patricia Pelz¹, Anne Beck², Robert C. Lorenz², Katrin Charlet², Josephine Krueger², Carolin Wackerhagen², Olga Geisel², Eva Friedel², Roman Banas², Andreas Heinz², Christian Müller²
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- 1045 Frontostriatal intrinsic connectivity abnormalities in methamphetamine users with psychosis**
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- 1046 Anticipatory Reward Processing is Modulated by Varenicline and Nicotine in Cigarette Smokers**
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- 1047 Resting State Functional Connectivity of Drinkers and Smokers**
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- 1048 Functional and Structural Alterations in Adolescents with Familial History of Substance Use Disorder**
Zhishun Wang¹, Jianping Qiao², Lawrence Amsel³, Lupo Geronazzo⁴, Cristiane Duarte³, George Musa³, Thao Doan⁵, Xiaofu He⁵, Joy Hirsch⁶, Christina W. Hoven⁵
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- 1049 Neural correlates of sexual arousal processing in individuals with Sex addiction**
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- 1050 Brain Connectivity and Being Connected: Internet addiction and intrinsic brain organization**
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- 1051 Modeling and Measuring the Placebo Effect in Craving and Nicotine Addiction Using fMRI**
Ariana Anderson¹, Wesley Kerr², Pamela Douglas², Mark Cohen²
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- 1052 Temporal dynamics of neural responses to alcohol taste cues in alcohol-dependent individuals**
Dara Ghahremani¹, Kelly Courtney¹, Lara Ray¹
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- 1053 Activation of the anterior cingulate cortex during the perception of angry faces in alcoholics**
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ALZHEIMER'S DISEASE AND OTHER DEMENTIAS

- 1054 Task-induced brain responses and $\alpha 4\beta 2$ nicotinic receptor binding in Alzheimer's disease**
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- 1055 Separation of neurodegenerative diseases based on the network degeneration hypothesis: PET/MRI study**
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- 1056 Increased default mode network activation in phenocopy FTD and behavioural variant FTD patients**
Rozanna Meijboom¹, Rebecca Steketee¹, Inge de Koning², Robert Jan Osse³, Lize Jiskoot², Frank Jan de Jong⁴, Aad van der Lugt¹, John van Swieten⁴, Marion Smits¹
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- 1057 Morphological Studies to Model Brain Function and Dysfunction in MCI**
Andrea Kälin¹, Mallar Chakravarty², Jason Lerch³, Min-Tae Park², Lars Michels⁴, Florian Riese⁵, Spyros Kollias⁴, Anton Gietl¹, Paul G. Unschuld¹, Roger Nitsch¹, Christoph Hock¹, Sandra Evelyn Leh¹
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- 1058 Brain structural and functional changes in elderly patients with and without Postoperative cognitive**
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- 1059 Increased synchronous activity in MTL subregions is associated with cortical thinning in AD**
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- 1060 ApoE- $\epsilon 4$ is associated with ventricular expansion and surface morphology in dementia and normal aging**
Florence Roussotte¹, Boris Gutman¹, Sarah Madsen², John Colby³, Katherine Narr⁴, Paul Thompson⁵
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- 1061 Dementia risk variant in CLU affects ventricular expansion and surface morphology in the elderly**
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- 1062 Disrupted Functional Connectivity of ACC Related to Differential Degeneration of the Cingulum in MCI**
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- 1063 Specific Cholinergic Forebrain Atrophy in individuals with Subjective Cognitive Decline**
Lukas Scheef¹, Michel Grothe², Marcel Daamen¹, Henning Boecker³, Hans Schild⁴, Michael Wagner⁵, Stefan Teipel², Frank Jessen⁶
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- 1064 Studying brain networks in Alzheimer's disease and Mild Cognitive Impairment using FDG-PET**
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- 1065 APOE-4 effects on the brain networks attributes in Alzheimer Disease and Mild Cognitive Impairment**
Lester Melie-Garcia¹, Gretel Sanabria-Diaz², for the Alzheimer's Disease Neuroimaging Initiative³
¹LREN, Department of Clinical Neurosciences, CHUV, Lausanne, Switzerland, ²Left Job at Cuban Neuroscience Center, La Habana, Cuba, ³Alzheimer's Disease Cooperative Study, University of California, San Diego, CA
- 1066 Effect of APOE4 on Partial Volume-Corrected DTI Data in Patients with AD and MCI**
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- 1067 Accurate Prediction of Conversion to Alzheimer's Disease when combining Multimodal Biomarkers**
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- 1068 Boosting Alzheimer Clinical Trial Power with an Updated, Unbiased Tensor-Based Morphometry Approach**
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- 1069 Anatomical and functional brain connectome changes in subjects with cognitive impairment no dementia**
Zhaoping Hong¹, Reza Khosrowabadi¹, Saima Hilal², Joanna Su Xian Chong¹, Tien Yin Wong^{3,4}, Narayanaswamy Venketasubramanian⁵, Christopher Li-Hsian Chen², Mohammad Kamran Ikram^{3,4,6,7}, Juan Zhou^{1,8}
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- 1070 Increased prefrontal activation in early Alzheimer's disease: Results from a MEG study**
Xiaowei Song^{1,2,3}, Maggie Clarke¹, Timothy Bardouille^{1,4}, Sultan Darvesh^{3,5,6}, John Fisk^{2,3,7,8}, Steven Beyea^{1,9,10}, Ryan D'Arcy^{11,12}, Kenneth Rockwood^{2,3,6}
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- 1071 Functional Connectivity of the Primary Olfactory Cortex in Alzheimer's and Mild Cognitively Impaired**
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- 1072 Network hubs are targeted by multiple neurodegenerative diseases**
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- 1073 Voxel based morphometry as priors for structural connection analysis in Alzheimer Disease**
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- 1074 Effect of Neuroinflammation in Preclinical Alzheimer's Disease**
Barbara Bendlin¹, Cynthia Carlsson¹, Sterling Johnson², Ozioma Okonkwo¹, Maritza Dowling¹, Andrew Alexander¹, Nagesh Adluru¹, Nancy Davenport¹, Carey Gleason¹, Sharon Yuan-Fu Lu¹, Dan Destiche¹, LeAnn DeRungs¹, Henrik Zetterberg³, Kaj Blennow³, Sanjay Asthana¹, Mark Sager¹
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- 1075 Cerebral perfusion in autosomal-dominant familial Alzheimer's disease measured by 3D-GRASE pCASL MRI**
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- 1076 Alzheimer's disease's progression and foci as estimated by network-diffusion modelling**
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- 1077 From Mild Cognitive Impairment to Alzheimer's Disease: Longitudinal Change of White Matter Volume**
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- 1078 Regional Laterality Differentiates Stable Mild Cognitive Impairment and Converters**
Xiaojing Long¹, Lijuan Zhang¹, Chunxiang Jiang¹, Yanjun Diao¹
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- 1079 Structural MRI in frontalvariant Frontotemporal dementia: A Voxel Based Morphometry Study**
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- 1080 Structural changes of the basal forebrain cholinergic system and cortical thinning in AD diagnosis**
Ingo Kilimann¹, Michel Grothe², Helmut Heinsen³, Giovanni Frisoni⁴, Arun Bokde⁵, Andreas Fellgiebel⁶, Massimo Filippi⁷, Harald Hampel⁸, Stefan Klöppel⁹, Stefan Teipel¹⁰
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- 1081 Cortical thinning in individuals with subjective cognitive decline**
Dix Meiberth¹, Lukas Scheef², Henning Boecker², Wolfgang Block³, Frank Träber³, Susanne Erk⁴, Michael Heneka⁵, Heike Jacobi⁶, Annika Spottke⁷, Henrik Walter⁸, Michael Wagner⁹, Steffen Wolfgruber⁷, Xiaochen Hu¹, Frank Jessen¹
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- 1082 Sulcal curvature and cortical thickness relationships in conversion towards Alzheimer's disease**
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- 1083 The fornix in amnesic mild cognitive impairment: a constrained spherical deconvolution study**
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- 1084 Investigation of the Covariance Structure of the Alzheimer's Disease Brain**
Arun Bokde¹, Dervla Farrell¹, Judith Kemper², Jonathan McNulty³, Paul Mullins⁴, Elizabeth Kehoe⁵, The ADNI⁶
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- 1085 Epidemic spreading behavior of Amyloid- β proteins in healthy and diseased brains**
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¹Montreal Neurological Institute, Montreal, Canada
- 1086 Novel bioinformatics driven imaging-genetics approach exploring the aetiology of Alzheimer's disease**
Sejal Patel^{1,2}, Min Tae Park³, Jon Pipitone³, Mallar Chakravarty^{3,4}, Jo Knight^{1,2}, The ADNI⁵
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- 1087 Language and decision-making in pronouns resolution: A study of three neurodegenerative diseases**
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- 1088 Preclinical evidence for neurodegeneration in C9ORF72 hexanucleotide repeat expansion carriers**
Suzee Lee¹, Anna Khazenzon¹, Andrew Trujillo¹, Jesse Brown¹, Anna Karydas¹, Giovanni Coppola², Dan Geschwind², Rosa Rademakers³, Howard Rosen¹, Bruce Miller¹, William Seeley¹
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- 1089 Semi-supervised learning for early MRI-based MCI-to-AD conversion prediction**
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¹Tampere University of Technology, Tampere, Finland, ²University of Jena, Jena, Germany
- 1090 Dysregulated daily rhythmicity of resting-state networks in patients with mild cognitive impairment**
Janusch Blautzik¹, Celine Vetter², Annalisa Schneider³, Veronika Reinisch⁴, Evgeny Gutyrchik², Daniel Keeser⁵, Marco Paolini³, Ernst Poeppel², Yan Bao⁶, Maximilian Reiser³, Till Roenneberg², Thomas Meindl³
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- 1091 Brain plasticity in mild Alzheimer's Disease. Effects of a computer-based cognitive training**
Francesco Barban¹, Roberta Annicchiarico¹, Giovanni Carlesimo², Marco Bozzali¹, Mara Cercignani³, Emiliano Macaluso¹, Claudia Ricci¹, Maria Giovanna Lombardi¹, Fulvia Adriano¹, Lucia Fadda¹, Carlo Caltagirone², Roberta Perri¹
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- 1092 Resting state fMRI brain network connectivity in dementia with Lewy Bodies and Alzheimer's disease**
Luis Peraza¹, Marcus Kaiser², Michael Firbank³, Sara Graziadio², John O'Brien⁴, John-Paul Taylor²
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- 1093 Interactive effects of APOE ε4 allele and MCI pathology on brain structural network**
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- 1094 The Alteration of White Matter Network in AD and aMCI with Graph Theoretical Analysis**
Shin Tai Chong¹, Chun-Yi Zuo Lo¹, Kun-Hsien Chou², Yong He³, Ching-Po Lin¹
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- 1095 The posteromedial cortex subregions exhibit distinct functional alterations in Alzheimer's diseases**
Yaqin Zhang¹, Luqi Cheng¹, Yong Liu², Tianzi Jiang³
¹School of Life Science and Technology, University of Electronic Science and Technology of China, Chengdu, China, ²Institute of Automation, Chinese Academy of Sciences, Beijing, China, ³Institute Of Automation, Chinese Academy Of Sciences, Beijing, China
- 1096 Improving response inhibition in frontotemporal dementia: a pharmacological MEG study**
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- 1097 Amyloid deposition in Middle-Aged Adults: Differential Relationships with Cognition**
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- 1098 Morphometric and volumetric changes in MCI using novel in-vivo segmentation techniques**
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- 1099 Multimodal MRI in prodromal Alzheimer's disease patients**
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- 1100 Multimodal fMRI resting-state in Granulin mutations: the case of fronto-parietal dementia**
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- 1101 Perfusion differences in mild cognitive impairment depend on both ApoE and amyloid deposition**
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- 1102 Testing the network-specificity of Alzheimer's disease pathology in-vivo: A multimodal imaging study**
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- 1103 The role of the parietal lobe in the converting from MCI to Alzheimer's disease: An MRI Study**
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- 1104 Automated Multi-atlas Labeling of the Fornix Applied to Track Alzheimer's Disease**
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- 1105 Functional connectivity changes of cognitive reserve in prodromal Alzheimer's disease**
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- 1106 Altered Neural Responses to Affective Repetition in Persons with Mild Cognitive Impairment**
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- 1107 Neural correlates of grammatical impairment in primary progressive aphasia**
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- 1108 Evidence for the recruitment of novel brain areas to process working memory in MCI patients**
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- 1109 Cerebrovascular and genetic risk influences on hippocampal thickness**
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- 1110 FMRI Responses of Alzheimer's Disease and Mild Cognitive Impairment Patients during Target Detection**
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- 1111 Large scale reorganization of electrophysiological resting brain networks in dementia**
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- 1112 Computation based diagnosis reveals intermediate Alzheimer's disease phenotypes**
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- 1113 Selective attention deficits in Alzheimer's disease correlate with functional connectivity changes**
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- 1114 Shape-constrained Deformable Segmentation for Alzheimer's Disease**
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- 1115 Fornix atrophy in adults with normal cognition, mild cognitive impairment, and Alzheimer's disease**
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- 1116 DTI Connectivity Detects White Matter Changes in Frontotemporal Dementia and Alzheimer's Disease**
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- 1117 Comparison of Subcortical Morphometry in Alzheimer's Disease and HIV + Subjects**
Benjamin Wade¹, Shantanu Joshi², Martin Reuter³, Eric Darr⁴, Thomas Campbell⁵, Giovanni Schifitto⁶, Elyse Singer⁷, Ron Cohen⁸, Mark Brown⁹, Xue Hua¹, Jeffry Alger¹⁰, David Tate¹¹, Bradford Navia¹², Paul Thompson¹
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- 1118 Progressive Deterioration of Default-mode Functional Connectivity within Mild Cognitive Impairment**
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- 1119 Validation of quantitative regional atrophy dementia classification in a large clinical MRI sample**
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- 1120 Alzheimer's Disease Amyloid Pathology Susceptibility Genes Predict Brain Atrophy over 24 Months**
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- 1121 Memory-related functional connectivity differences in adults at genetic risk for Alzheimer disease**
Theresa Harrison¹, Alison Burggren¹, Gary Small², Susan Bookheimer³
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- 1122 Improved Brain Connectivity Disease Classification by Iteratively Reorganizing Models**
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- 1123 Reduced functional network efficiency predicts accelerated atrophy in progressive supranuclear palsy**
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- 1124 Connectomic neuroimaging for estimating effective brain age as a biomarker of neurodegeneration**
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- 1125 Longitudinal changes in white matter integrity are associated with cognitive decline in the elderly**
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- 1126 Specific atrophy patterns in corticobasal syndrome with alien limb**
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- 1127 Estrogen Use, Brain Volume and Cognitive Function in a Cohort of Elderly Women**
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DEVELOPMENTAL DISORDERS

- 1128 Behavioral and EEG effects of working memory updating training in children with learning disabilities**
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- 1129 Multimodal neuroimaging of decision making in attention deficit/hyperactivity disorder (ADHD)**
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- 1130 Executive function and cortical thickness in youth prenatally exposed to cocaine, alcohol & tobacco**
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- 1131 Subcortical shape and DTI findings in children with ADHD with and without co-existing tic disorder**
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- 1132 Neurophysiological mechanisms of stress sensitivity and symptom severity in children with tics**
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- 1133 Dementia status and cognition related to neuroimaging measures in adults with Down Syndrome**
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- 1134 (Sub)cortical volume changes and brain-behavior relationships in youth prenatally exposed to alcohol**
Prapti Gautam¹, Katherine Narr², Philip May³, Colleen Adnams⁴, Ed Riley⁵, Kenneth Jones⁶, Eric Kan⁷, Elizabeth Sowell⁸, Catherine Lebel⁹
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- 1135 Correspondence between aberrant visual attention and intrinsic connectivity in preterm born adults**
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- 1136 fNIRS monitoring of methylphenidate effects for attention deficit/hyperactivity disorder in children**
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- 1137 Brain structure and ADHD across the life span: an ENIGMA collaboration**
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- 1138 Anterior cingulate functional connectivity as a biomarker for ADHD**
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- 1139 Finding developmental phonagnosics: a web-based screening approach**
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- 1140 Aberrant intrinsic network connectivity and gray matter volume overlap in preterm born adults**
Josef Georg Baeuml^{1,2}, Marcel Daamen³, Chun Meng^{1,2}, Julia Neitzel^{1,2}, Lukas Scheef³, Julia Jaekel^{4,5}, Barbara Busch⁶, Nicole Baumann⁴, Peter Bartmann⁶, Dieter Wolke^{4,7}, Henning Boecker³, Afra Wohlschläger^{1,2}, Christian Sorg^{1,8,2}
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- 1141 Stuttered and Fluent Speech: A Series of Targeted ALE Meta-Analyses**
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- 1142 The effects of very early brain damage on adult working memory function: an fMRI study**
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- 1143 Reduced readiness potential in children with ADHD — evidence for altered voluntary motor control**
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- 1144 Reduced white matter integrity in infants at risk for developmental dyslexia**
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- 1145 New paradigms for modular phenotyping of developmental learning disabilities**
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- 1146 Brain-Behavior Associations with Default Mode and Cingulo-Opercular Networks in Children with ADHD**
Anita Barber¹, Lisa Jacobson¹, Joanna Wexler², Mary Beth Nebel¹, Brian Caffo², James Pekar¹, Stewart Mostofsky¹
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- 1147 Atypical functional connectivity within attention related networks in children with ADHD-CT**
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- 1148 Quality of life in cerebral palsy: Relationship between executive functions and cortical thickness**
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- 1149 Altered white matter microstructure in adults born preterm: a whole brain DTI study**
Chun Meng^{1,2,3}, Josef Bäuml^{2,1}, Marcel Daamen⁴, Julia Jaekel^{5,6}, Claus Zimmer², Peter Bartmann⁷, Dieter Wolke⁶, Henning Boecker⁴, Afra Wohlschläger^{2,1,3}, Christian Sorg^{8,2,1}
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- 1150 Processing of emotional distractor and target stimuli in adolescents with ADHD**
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- 1151 Sensation-to-Cognition Cortical Streams in Attention Deficit Hyperactivity Disorder**
Susana Carmona Cañabate¹, Eline Hoekzema², Javier Navas³, F. Xavier Castellanos⁴, M Desco⁵, Jorge Sepulcre⁶
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- 1152 Combining neuropsychological and neuroimaging data to assist the early diagnosis of dementia, (Modeling and Analysis Methods / PET Modeling and Analysis)**
Fernán Segovia¹, Christine Bastin¹, Eric Salmon¹, Christophe Phillips¹
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- 1153 Aberrant intra-striatal functional connectivity in ADHD**
Marianne Oldehinkel^{1,2}, Daniel Von Rhein^{1,2}, Maarten Mennes^{1,2}, Christian Beckmann^{3,4}, Jan Buitelaar^{1,5}
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- 1154 Premotor white matter integrity correlates with response control in males, but not females with ADHD**
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- 1155 Are neural correlates of reading in dyslexic participants consistent with main theories of dyslexia?**
Agnieszka Reid¹
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- 1156 Gait pathology is related to brain lesions in children with unilateral and bilateral cerebral palsy**
Pieter Meyns¹, Leen Van Gestel¹, Paul De Cock¹, Stefan Sunaert¹, Hilde Feys¹, Jacques Duysens¹, Kaat Desloovere², Els Ortibus²
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- 1157 Single-trial EEG/fMRI analysis reveals deficiency on neural timing in ADHD**
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- 1158 Prenatal Alcohol Exposure Associations with Structural Connectivity Differ in Boys and Girls**
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- 1159 Intrinsic Connectivity in Congenital Amusia: Is the Auditory Cortex Resting?**
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- 1160 Altered word recognition in ADHD boys with a comorbid Reading Disability: A preliminary fMRI study**
Brianne Mohl¹, Dhruvan Goradia¹, Richard White¹, Usha Rajan¹, Dalal Khatib¹, Caroline Zajac-Benitez¹, Joseph Casey², Vaibhav Diwadkar¹, Noa Ofen³, Jeffrey Stanley¹
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- 1161 Evidence of reading network dysfunction in ADHD Boys with poor phonological ability: A fMRI study**
Brianne Mohl¹, Dhruvan Goradia¹, Richard White¹, Dalal Khatib¹, Usha Rajan¹, Caroline Zajac-Benitez¹, Joseph Casey², Vaibhav Diwadkar¹, Noa Ofen³, Jeffrey Stanley¹
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- 1162 Deterministic tractography of the corpus callosum in children with spina bifida myelomeningocele**
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- 1163 Task-Related Neural Organization in ADHD**
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- 1164 A multimodal examination of interhemispheric connectivity and mirror overflow in ADHD**
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- 1165 Associations between structural connectivity and cognition in youth prenatally exposed to alcohol**
Kristina Uban¹, Kirsten Lynch², Alexy Andrade³, Megan Herting¹, Prapti Gautam⁴, S. Christopher Nu  ez⁵, John Colby⁶, Eric Kan⁷, Colleen Adnams⁸, Philip May⁹, Katherine Narr¹⁰, Sarah Mattson¹¹, Ed Riley¹¹, Elizabeth Sowell¹²
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- 1166 The Effect of Maternal Substance Abuse on Fetal Brain Growth**
Devasuda Anblagan¹, Kaiming Yin¹, Rebecca Reynolds¹, Fiona Denison¹, Mark Bastin¹, Colin Studholme², James Boardman¹, Scott Semple¹, Neil Roberts¹, Jane Norman¹
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- 1167 Relevance of Caudate Symmetry in Classifying ADHD**
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- 1168 Hyper- Dynamic Causal Interaction in the Salience Network in Childhood and Adolescent ADHD**
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- 1169 Differences in the Default Mode Network between Premature and Full-term Infants**
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- 1170 MRI and DTI reveal no differences between HIV-exposed and unexposed HIV-negative children**
Neda Jahanshad¹, Wasana Prasitsuebsai², Victor Valcour³, Thanyawee Puthanakit⁴, Akash Desai⁵, Talia Nir⁶, Stephanie Catella⁵, Marie-Claude Couture⁵, Stephen Kerr⁷, Linda Aupibul⁸, Pope Kosalaraksa⁹, Raviwan Hansudewechakul¹⁰, Suparat Kanjanavanit¹¹, Chaiwat Ngampiyaskul¹², Jurai Wongsawat¹³, Wicharn Luesomboon¹⁴, Kanchana Pruksakaew², Mantana Pothisri⁴, Kattiya Ratanadilok¹⁵, Sukalaya Lerdlum⁴, Pannee Visrutaratna¹⁶, Jintanat Ananworanich², Paul Thompson¹⁷
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- 1171 Association of very preterm infant DTI measures and cognitive outcomes**
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- 1172 Mapping brain plasticity in an fMRI study of novel rehabilitation in unilateral cerebral palsy**
Roslyn Boyd^{1,2}, David Abbott^{2,3}, Andrea Guzzetta^{4,5}, Leanne Sakzewski^{6,2}, Richard Macdonell^{7,2}, Graeme Jackson^{2,3}
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- 1173 Extrageniculo-striate visual pathway changes in cortical visual impairment characterized by HARDI**
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- 1175 Graph theoretical analysis of structural brain networks in individuals with psychotic experiences**
Mark Drakesmith¹, Anirban Dutt², Glyn Lewis³, Anthony David², Derek Jones¹
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- 1176 Left Fronto-Temporal Disconnectivity in the Language Network in Schizophrenia: An fMRI and DTI Study**
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- 1177 Exploring the sensory complexity of hallucinatory experiences using multimodal connectivity analysis**
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- 1178 Macro- and micro-structural brain changes in individuals at risk of psychosis: A birth cohort study**
Mark Drake-Smith¹, Anirban Dutt², Glyn Lewis³, Anthony David², Derek Jones¹
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- 1179 Multimodal Imaging in Individuals at Clinical High Risk for Psychosis**
Tiziano Colibazzi¹, Zhishun Wang², Dongrong Xu³, Guillermo Horga⁴, Yuankai Huo⁴, Chao-Gan YAN⁵, Bradley Peterson⁶
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- 1180 Investigation of MRI anatomical measurements as endophenotypic markers of Bipolar Disorder**
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- 1181 Relation of theta amplitude to fMRI functional networks during working memory in schizophrenia**
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- 1182 Generative network architectures underlying emotional salience: Predicting risk for schizophrenia**
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- 1183 Dysfunctional Activation of the Cerebellum in Schizophrenia: A Functional Neuroimaging Meta-Analysis**
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- 1184 Self-Reference Processing in Schizophrenia Patients and Delusion-Prone Participants**
Teresa Katthagen¹, Anne Pankow¹, Sarah Diner¹, Michael Gaebler¹, Henrik Walter¹, Andreas Heinz¹, Schlagenhauf Florian^{1,2}
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- 1185 Connectivity During Rest in Relation to Apathy in Patients with Schizophrenia**
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- 1186 Impaired uncertainty processing and neural prediction error coding in prodromal schizophrenia**
David Cole^{1,2}, Kay H. Brodersen¹, Christoph Mathys^{1,3}, Andreea Oliviana Diaconescu^{1,2}, Dominika Jolkowski⁴, Ulrich Pfeiffer⁴, Stephan Ruhrmann⁴, Leonhard Schilbach⁴, Marc Tittgemeyer⁵, Kai Vogeley⁴, Klaas Enno Stephan^{1,2,3}
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- 1187 Cerebral Asymmetries in Schizophrenia: Surface Area, Cortical Thickness and White Matter Integrity**
Shuraku Son¹, JUN MIYATA¹, Katja Koelkebeck², Manabu Kubota¹, Hidenao Fukuyama³, Toshihiko Aso³, HIDEHIKO TAKAHASHI¹, TOSHIYA MURAI¹
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- 1188 Training of executive functions: effects on neural brain circuits in patients with schizophrenia**
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- 1189 Static and dynamic functional connectivity across rest and sensory tasks in schizophrenia**
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- 1190 Nonlinear cumulative risk effects of migration status and sex on perigenual anterior cingulate**
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- 1191 Lack of progressive cortical thinning during the first 3 years of schizophrenia**
Roberto Roiz-Santiañez^{1,2}, Victor Ortiz-Garcia de la Foz^{1,2}, Rosa Ayesa-Arriola^{1,2}, Diana Tordesillas-Gutierrez^{3,2}, Ricardo Jorge⁴, Noemi Varela¹, Paula Suárez-Pinilla^{1,2}, Aldo Córdova-Palomera^{5,2}, Benedicto Crespo-Facorro^{1,2}
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- 1192 Fronto-parietal connectivity and psychopathology in subjects at high-risk for psychosis**
André Schmidt¹, Renata Smieskova¹, Paul Allen², Paolo Fusar-Poli², Philip McGuire², Undine Lang¹, Marc Walter¹, Ernst-Wilhelm Radue³, Anita Riecher-Rössler¹, Stefan Borgwardt¹
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- 1193 Differential resting-state connectivity of the anterior and posterior DLPFC in schizophrenia**
Thomas Nickl-Jockschat¹, Edna-Clarisse Cieslik², Veronika Müller³, Peter Fox⁴, Lydia Kogler⁵, Birgit Derntl⁶, Iris Sommer⁷, Oliver Gruber⁸, Simon Eickhoff⁹
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- 1194 Surprise! Relevance and Regularity ERP Differences in Controls and Patients with Schizophrenia**
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- 1195 Hippocampal Subfield Volumes in Schizophrenia and Bipolar disorder**
Unn Kristin Haukvik^{1,2}, Lars Westlye^{1,3}, Lynn Mørch-Johnsen^{2,1}, Kjetil Jørgensen^{2,1}, Elisabeth Lange^{2,1}, Anders Dale⁴, Ingrid Melle⁵, Ole Andreassen⁵, Ingrid Agartz^{1,2}
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- 1196 Altered resting-state brain functional architecture in acute schizophrenic patients**
Yuan Zhou¹, Chen Cheng², Huan Huang², Yun Wang¹, Huilin Wang², Tianzi Jiang³
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- 1197 Disrupted thalamo-cortical connectivity in schizophrenia: a morphometric correlation analysis**
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- 1198 Disruption of Structure-Function Coupling in the Schizophrenia Connectome**
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- 1199 A DTI study of First Episode of Psychosis using TBSS and pothole approach**
Diana Tordesillas-Gutierrez^{1,2}, Victor Ortiz-Garcia de la Foz^{3,2}, Tonya White⁴, Roberto Roiz-Santiañez^{5,6}, Rosa Ayesa-Arriola^{3,2}, Ricardo Jorge⁷, Benedicto Crespo-Facorro^{3,2}
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- 1200 Further validation of a network intermediate phenotype for schizophrenia during emotion processing**
Hengyi Cao¹, Axel Schäfer¹, Oliver Grimm¹, Henrik Walter², Andreas Heinz², Leila Haddad¹, Andreas Meyer-Lindenberg¹, Heike Tost¹
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- 1201 Reward prediction error and motivational salience abnormalities in early psychosis**
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- 1202 Brain systems regulating metabolic profile changes during treatment in first-episode schizophrenia**
Robin Emsley¹, Laila Asmal¹, Bonginkosi Chiliza¹, Stéfan Du Plessis¹, Jonathan Carr², Martin Kidd³, Matthijs Vink⁴, René Kahn⁵
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- 1203 The Neural Substrates of Dysfunctional Empathy in Persons Clinically at Risk for Psychosis**
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- 1204 Effects of exercise on white matter integrity in patients with schizophrenia and healthy controls**
Alena Svatkova¹, René Mandl², Thomas Scheewe², René Kahn³, Wiepke Cahn³, Hilleke Hulshoff Pol³
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- 1205 Effects of MIR137 on fronto-amygdala functional connectivity**
Omar Mothersill¹, Derek Morris², Sinead Kelly¹, Emma Rose³, Ciara Fahey¹, Carol O'Brien¹, Ronan Lyne¹, Richard Reilly¹, Michael Gill¹, Aiden Corvin¹, Gary Donohoe²
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- 1206 Neural correlates of self-reference processing and aberrant salience in healthy individuals**
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- 1207 Antipsychotic medication changes functional brain network organization in schizophrenia**
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- 1208 A matter of deactivation? Neural correlates of psychosocial stress in schizophrenia patients**
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- 1209 Disruption of dorsal and ventral salience brain networks in schizophrenia**
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- 1210 A Method Combining Locally Linear Embedding and Support Vector Machine for Schizophrenia Diagnostics**
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- 1211 Task-independent BOLD Effects May Confound Interpretation of Schizophrenia fMRI Learning Studies**
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- 1212 Feasibility of Neurofeedback to Modify EEG Resting State Microstates Relevant for Mental Health**
Laura Díaz Hernández¹, Béatrice Zumkehr¹, Christine Krebs¹, Anja Baenninger¹, Thomas Koenig¹
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- 1213 Randomization of Brain Functional Network as an Endophenotype for Schizophrenia**
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- 1214 Dysfunctional processing of low spatial frequency face picture in schizophrenia patients**
Do-Won Kim^{1,2}, Miseon Shim^{1,2}, Seung-Hwan Lee^{3,2}, Chang-Hwan Im¹
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- 1215 Telling Them Apart: Elucidating White Matter Abnormalities in Bipolar Disorder and Schizophrenia**
Zhengjun Li¹, Carissa Kuswanto², Min Yi Sum², Han Ying Tng¹, Kang Sim², Juan Zhou^{1,3}
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- 1216 The relationship between brain activity during rubber hand illusion and schizotypal personality**
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- 1217 Resting-state connectivity in the prodromal phase of schizophrenia: insights from EEG microstates**
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- 1218 Social-cognitive deficits in schizophrenia go along with altered superior temporal sulcus activation**
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- 1219 Impact of ZNF804A on the Theory of Mind network: expanding the evidence**
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- 1220 Dysregulated VTA activation challenges goal-directed behavior in schizophrenic patients**
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- 1221 Altered cortical network hub in schizophrenia during auditory oddball task**
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- 1222 Pathophysiological underpinnings of aberrant salience in schizophrenia — an fMRI study**
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- 1223 Inverse Relationship between Thalamus ALFF and Thalamocortical Connectivity in Schizophrenia**
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- 1224 Structural deficits in primary emotion processing areas underlying apathy in schizophrenia**
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- 1225 Meta-analysis of myo-inositol in Schizophrenia**
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- 1226 Gene-wide multi-locus effects of risk variants in CACNA1C in a hippocampal-frontolimbic network**
Susanne Erk¹, Andreas Meyer-Lindenberg², David Linden³, Thomas Lancaster³, Sebastian Mohnke¹, Oliver Grimm², Franziska Degenhardt⁴, Peter Holmans³, Andrew Pocklington³, Phoebe Schmierer¹, Leila Haddad², Thomas Muehleisen⁵, Manuel Mattheisen⁶, Stephanie Witt², Nina Romanczuk-Seiferth¹, Heike Tost², Björn Schott¹, Sven Cichon⁵, Markus Nöthen⁴, Marcella Rietschel², Andreas Heinz¹, Henrik Walter¹
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- 1227 Increased gamma oscillations evoked by physically salient distracters are associated with schizotypy**
Laura Kornmayer¹, Gregor Leicht¹, Christoph Mulert¹
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- 1228 Increased interhemispheric gamma synchrony and auditory verbal hallucinations in schizophrenia**
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- 1229 Simultaneous assessment of EEG gamma oscillations and fMRI in the prodromal phase of schizophrenia**
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- 1230 Functional connectivity alterations in a neural network for executive functioning in schizophrenia**
Deepthi Varikuti¹, Simon Eickhoff¹, Veronika Müller¹, Iris Sommer², Birgit Derntl³, Lydia Kogler³, Oliver Gruber⁴, Aleksandra Petrovic⁴, Felix Hoffstaedter¹, Edna-Clarisse Cieslik¹
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- 1231 Mismatch Negativity Deficits are Associated with Reduced Theta Power in Patients with Schizophrenia**
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- 1232 The Contribution of Encoding and Maintenance Deficits to Working Memory Impairment in Schizophrenia**
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- 1233 Reduced Deactivation in mPFC and ACC in Patients with Auditory Hallucinations during Inner Speech**
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- 1234 Vulnerability to Auditory Verbal Hallucinations and connectivity in the perisylvian language network**
Stefania Benetti^{1,2}, William Pettersson-Yeo³, Paul Allen³, Marco Catani⁴, Steven Williams⁵, Lana Marija Kambeitz-Ilankovic⁶, Philip McGuire McGuire⁷, Andrea Mechelli⁴
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- 1235 Reduced early auditory evoked gamma-band response in patients with schizophrenia — an MEG study**
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- 1236 Anticipation of social and monetary rewards in schizophrenic patients**
Jona Ruben Iffland¹, Bernd Hanewald², Helge Gebhardt³, Denise Lockhofen⁴, Soeren Krach⁵, Frieder Paulus⁶, Bernd Gallhofer⁷, Gebhard Sammer⁸
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- 1237 Alterations in the visually evoked gamma response in relation to the schizophrenia symptom profile**
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- 1238 Altered Temporo-Parietal Junction Resting-State Functional Connectivity Pattern in Schizophrenia**
Rachel Pläschke^{1,2}, Veronika Müller^{1,2}, Edna-Clarisse Cieslik^{1,2}, Birgit Derntl³, Lydia Kogler³, Oliver Gruber⁴, Aleksandra Petrovic⁴, Renaud Jardri⁵, Iris Sommer⁶, Danilo Bzdok^{1,2}, Simon Eickhoff^{1,2}, Robert Langner^{1,2}
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- 1239 Impaired visual working memory consolidation in schizophrenia investigated with fMRI**
Michael Stäblein¹, Helena Storchak¹, Christian Knöchel¹, Constanze Rickmeyer¹, Robert Bittner¹, Anna Seitz¹, David Prvulovic¹, Viola Oertel-Knöchel¹
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- 1240** **Insight in schizophrenia and anatomical and functional brain connectivity during self-reflection**
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- 1241** **Sensorimotor self-monitoring is functionally and behaviorally altered in schizophrenic patients**
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- 1242** **Seeing a speaker's face does not help?**
Katharina Hass¹, Tanya Reese¹, Mandy Roy¹, Gregor R. Szycik¹, Daniel Wiswede²
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- 1243** **Automatic classification of individuals at risk for psychosis by means of a working memory network**
Kerstin Bendfeldt¹, Renata Smieskova^{1,2}, André Schmidt^{1,2}, Anna Walter², Fabienne Harrisberger^{2,1}, Johannes Wrege², Andor Simon³, Bernd Taschler⁴, Thomas Nichols⁴, Anita Riecher-Rössler², Ernst-Wilhelm Radue¹, Stefan Borgwardt^{2,5,1}
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- 1244** **Impact of schizophrenia risk variant rs7914558 at CNM2 on white matter microstructure**
Sinead Kelly¹, Derek Morris¹, Omar Mothersill¹, Emma Rose², Ciara Fahey¹, Carol O'Brien¹, Erik O'Hanlon³, Michael Gill¹, Aiden Corvin¹, Gary Donohoe⁴
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- 1245** **Resting intrinsic connectivity networks in schizophrenia: Group spatial ICA of MEG and fMRI data**
Jon Houck^{1,2}, Mustafa Sinan Cetin^{1,2}, Andrew Mayer^{2,1}, Juan Bustillo¹, Matthew Brookes³, Vince Calhoun^{2,1}
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- 1246** **Reduced Auditory Regularity Sensitivity in Schizophrenia: Wavelet Analysis of Oddball ERP's**
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- 1247** **Transdiagnostic similarities and differences in functional connectivity in schizophrenia and depress**
Leonhard Schilbach¹, Veronika Müller², Edna-Clarisse Cieslik³, Felix Hoffstaedter⁴, Roberto Goya-Maldonado⁵, Aleksandra Petrovic⁶, Christian Sorg⁷, Valentin Riedl⁸, Renaud Jardri⁹, Iris Sommer¹⁰, Birgit Derntl¹¹, Lydia Kogler¹², Oliver Gruber¹³, Simon Eickhoff¹⁴
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- 1248 Postural gesture knowledge in schizophrenia is associated with left inferior frontal gyrus volume**
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- 1249 Subcortical and cortical variations in schizophrenia: the ENIGMA SZ Working Group**
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- 1250 Functional Activation of Associative Memory Deficits in Schizophrenia, Bipolar Disorder and ADHD**
Kristen Haut¹, Rebecca Schwarzlose², Katherine Karlsgodt³, Russell Poldrack⁴, Robert Bilder⁵, Eliza Congdon⁶, Nelson Freimer⁶, Edythe London⁷, Fred Sabb⁵, Theo van Erp⁸, Joseph Ventura⁹, Tyrone Cannon¹
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- 1251 Prediction Error fMRI and MRS of Midbrain Glutamate in Schizophrenia and Healthy Controls**
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- 1252 Reduced Functional Connectivity Entropy and its Relation to Glutamate Hypofunction in Schizophrenia**
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- 1253 Joint multivariate pattern recognition analysis of brain function and structure in schizophrenia**
Lana Marija Kambeitz-Ilankovic¹, Nikolaos Koutsouleris¹, Sebastian von Salder¹, Peter Falkai¹, Carlos Cabral¹
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- 1254 Diagnosing schizophrenia using neuroimaging: a meta-analysis of multivariate pattern studies**
Joseph Kambeitz¹, Lana Kambeitz-Ilankovic¹, Stefan Leucht², Stephen Wood³, Berend Malchow¹, Christos Davatzikos⁴, Peter Falkai⁵, Nikolaos Koutsouleris⁶
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- 1255 Genetic Markers of White Matter Integrity in Schizophrenia Revealed by Parallel ICA**
Navin Cota¹, Jiayu Chen², Jessica Turner³, Nora Perrone-Bizzozero⁴, Godfrey Pearson⁵, Jingyu Liu⁶, Li Luo⁷, Eswar Damaraju⁸, Andrew Michael⁶, Vince Calhoun⁹
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- 1256 Identification rates of Schizophrenia based on local brain volumes and dichotic listening scores**
Nuri Karabay¹, Didem Gokcay², Aykut Eken², Umut Orcun Turgut², Adile Oniz¹, Koksai Alptekin¹, Serhat taslica¹, Kenneth Hugdahl³, Murat Ozgoren¹
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- 1257 Increased Cortical Gyrfication in Subjects at Risk for Psychosis**
Roman Buechler^{1,2,3}, Diana Wotruba^{1,2,3,4}, Lars Michels³, Anastasia Theodoridou^{1,2}, Spyros Kollias³, Wulf Rössler^{1,2,4}, Karsten Heekeren^{1,2}
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- 1258 Abnormal Deactivation of Task-Related Networks in Schizophrenia During an Evidence Integration Task**
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- 1259 Gyrfication of Superior Temporal Gyrus in Schizophrenia: Possibility of Clinical Application**
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- 1260 fMRI Correlates of Gray Matter Density in childhood onset schizophrenia: Multimodal applications**
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- 1261 Sustained attention, frontal-thalamic networks and risk for schizophrenia: DCM applications in fMRI**
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- 1262 Aberrant Intrinsic Neural Oscillation in Early-Onset Schizophrenia**
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- 1263 Hallucination- and speech-specific hypercoupling in an auditory-motor network: Data from fBIRN**
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TRAUMATIC BRAIN INJURY

- 1264 Alteration in Brain Functional Connectivity in Traumatic Brain Injury Patients**
Ludmila Zhavoronkova¹, Elena Kushnir², Olga Maksakova³, Tatiana Shevtsova², Alexandra Zharikova⁴
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- 1265 Impaired self-awareness in diffuse axonal injury; a fMRI study**
Masaharu Maruishi¹
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- 1266 Short-term Intervention Alters the Resting State in Combat Veterans**
Rongxiang Tang¹, Yi-Yuan Tang²
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- 1267 FLAIR Hyperintensities Are Associated With Concussion History and Anxiety In Young Male Athletes**
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- 1268 Changed Amplitude of Low-Frequency Oscillations in Patients with Disorders of Consciousness**
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- 1269 The voice of anger: Emotional prosody to assess patients with altered states of consciousness**
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- 1270 Functional connectivity density and postural control in children with traumatic axonal injury**
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- 1271 Cerebrovascular Reactivity in Mild Traumatic Brain Injury: A fMRI and TCD Study**
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- 1272 Intrinsic connectivity during the early acute period of traumatic brain injury**
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- 1273 Insular cerebral blood flow and connectivity changes track recovery of sports-related concussion**
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- 1274 Automatic volume-based morphometry to assess atrophy in chronic traumatic brain injury**
Yang Wang¹, Gunnar Krueger², Dawn Neumann¹, Bénédicte Maréchal², Alexis Roche², John West¹, Brenna McDonald¹, Michelle Keiski¹, Dori Smith¹, Andrew Saykin¹
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- 1275 Alterations in resting-state functional connectivity in chronic traumatic brain injury**
Elena Shumskaya¹, Roy Kessels¹, Marcel van Gerven¹
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- 1276 Decreased functional motor network within 1 year interval in the professional fighter population**
Wanyong Shin¹, Katherine Koenig¹, Blessy Mathew¹, Sarah Banks², Mark Lowe¹, Michael Phillips¹, Michael Modic¹, Charles Bernick²
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- 1277 Distances between brain structures are related to damage in disorder of consciousness patients**
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- 1278 Cortical Thickness Correlates of Post-Concussion Symptoms in Healthy Young Ice Hockey Players**
Matthew Albaugh¹, Catherine Orr¹, Cole Zweber¹, James Slauterbeck¹, Scott Hipko¹, Jay Gonyea¹, Trevor Andrews¹, Joshua Nickerson¹, Richard Watts¹, James Hudziak¹
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- 1279 Resting State Connectivity of the Orbitofrontal Cortex and Thalamus in Mild Traumatic Brain Injury**
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- 1280 Compensatory Resting State Connectivity after Mild to Moderate Pediatric Traumatic Brain Injury**
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- 1281 Decreased Integrity of the Corpus Callosum Following Traumatic Brain Injury in Pediatric Patients**
Emily Dennis¹, Julio Villalon-Reina¹, Claudia Kernan², Talin Babikian², Christopher Giza³, Robert F. Asarnow², Paul Thompson¹
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- 1282 White Matter Integrity and Functional Connectivity in Asymptomatic Athletes with a History of TBI**
Catherine Orr¹, Matthew Albaugh², Trevor Andrews³, Hugh Garavan⁴, Joshua Nickerson³, Kerry O'Loughlin³, Katherine Logan⁵, Cole Zweber³, Jay Gonyea³, Scott Hipko³, Richard Watts⁶, James Hudziak⁴
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- 1283 Functional Network Correlates of Executive Dysfunction in Traumatic Brain Injury**
Anna-Clare Milazzo^{1,2}, Keith Main^{1,2}, Salil Soman^{1,2}, Jennifer Kong¹, Maxwell Rappoport³, Stephanie Kolakowsky-Hayner⁴, Ansgar Furst^{1,2}, J. Wesson Ashford^{1,2}, Michael Greicius⁵, Maheen Adamson^{1,2}
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- 1284 Characterization of T2 FLAIR Hyperintensities using T1p and Diffusion Weighted Imaging**
Catherine Orr¹, Matthew Albaugh², Richard Watts³, Trevor Andrews⁴, Cole Zweber⁴, David DeVellis⁵, Scott Hipko⁴, Jay Gonyea⁴, Joshua Nickerson⁴, Hugh Garavan⁵, James Hudziak⁵
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- 1285 Multimodal neuroimaging for mapping brain atrophy and axonal demyelination in traumatic brain injury**

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- 1286 Quantifying Traumatic Brain Injury White Matter Damage with High Definition Fiber Tracking**
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- 1287 Fractional Amplitude of Low-Frequency Fluctuations in Mild Traumatic Brain Injury**

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MOOD AND ANXIETY DISORDERS

- 1288 Affective Go/No-Go fMRI Study in Adolescent Depression**

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- 1289 Emotional unrest at rest in young people with bipolar disorder or at high genetic risk**

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- 1290 Treatment Effects of Electroconvulsive Therapy (ECT) on the Hippocampus in Major Depressive Disorder**

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- 1291 Characterizing abnormal brain networks in Major Depressive Disorder using Machine Learning**
Matthew Sacchet¹, Gautam Prasad^{1,2}, Lara Foland-Ross³, Paul Thompson², Ian Gotlib³
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- 1292 Facilitating access to emotions: neural signature of EMDR stimulation**
Birgit Abler¹, Deborah Herkt¹, Georg Grön¹, Arne Hofmann², Thomas Kammer¹, Visal Tuman¹
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- 1293 Interoceptive awareness as MDD state marker — fMRI in healthy, depressed and remitted participants**
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- 1294 Automated Identification of Abnormal Fiber Tracts in Major Depressive Disorder**
Matthew Sacchet¹, Gautam Prasad^{1,2}, Lara Foland-Ross³, Shantanu Joshi⁴, J Hamilton⁵, Paul Thompson², Ian Gotlib³
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- 1295 Using Structural Neuroimaging to Predict the Onset of Major Depression in Adolescence**
Matthew Sacchet¹, Lara Foland-Ross², Gautam Prasad^{1,3}, Brooke Gilbert², Paul Thompson³, Ian Gotlib³
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- 1296 Decreased insula-dorsal median frontal gyrus resting-state functional connectivity in major depression**
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- 1297 It is not all in the amygdala. An ALE meta-analysis of brain response to faces in Social Phobia**
Claudio Gentili¹, Leonardo Tozzi¹, Ioana Cristea², Pietrini Pietro³
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- 1298 Subtypes of Nucleus Accumbens Response to Gain and Loss Anticipations in Healthy and Depressed Group**
Masaya Misaki¹, Teresa Victor¹, Hideo Suzuki¹, Brett McKinney², Kent Teague³, Patrick Bellgowan^{1,4}, Jonathan Savitz^{1,4}, Wayne Drevets^{1,5}, Jerzy Bodurka^{1,6}
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- 1299 Aberrant subregional connectivity of the right temporoparietal junction in major depression**
Timm Poepl¹, Veronika Müller², Felix Hoffstaedter³, Danilo Bzdok⁴, Christian Sorg⁵, Valentin Riedl⁶, Roberto Goya-Maldonado⁷, Oliver Gruber⁸, Simon Eickhoff⁹
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- 1300 Extended social-affective default network: altered connectivity in depression**
Maren Amft¹, Danilo Bzdok^{1,2}, Oliver Gruber^{3,4}, Roberto Goya-Maldonado^{3,4}, Christian Sorg^{5,6}, Valentin Riedl^{6,7}, Veronika Müller^{1,2}, Simon Eickhoff^{1,2}
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- 1301 Prenatal depressive symptoms, intelligence and brain morphology — a population-based imaging study**
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- 1302 Effect of treatment on neural correlates of inhibition and contextual cue processing in PTSD**
Sanne van Rooij¹, Mitzy Kennis¹, Matthijs Vink¹, Arthur Rademaker², René Kahn¹, Elbert Geuze²
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- 1303 Neural activation during symptom provocation in acute stress disorder**
Jan Christopher Cwik^{1,2}, Gudrun Sartory², Benjamin Schürholt², Helge Knuppertz², Hans-Jörg Wittsack³, Rüdiger Seitz³
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- 1304 Effects of Ketamine on the Neuro-Endocrine Markers of Stress: a resting state fMRI and PCASL study**
Najmeh Khalili-Mahani^{1,2}, Marieke Niesters¹, Matthias Van Osch¹, Melly Oitzl³, Ilya Veer⁴, Mark de Rooij^{5,6}, Joop van Gerven^{7,1}, Mark van Buchem^{6,1}, Christian Beckmann⁸, Serge Rombouts^{6,5,1}, Albert Dahan¹
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- 1305 Voxel based morphometry and shape analysis of corpus callosum in major depressive disorder**
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- 1306 Response prediction in panic disorder with agoraphobia using fMRI based pattern classification**
Ulrike Lueken¹, Tim Hahn², Benjamin Straube³, Hans-Ulrich Wittchen¹, Carsten Konrad³, Andreas Ströhle⁴, André Wittmann⁴, Bettina Pfleiderer⁵, Volker Arolt⁶, Andreas Reif⁷, Tilo Kircher³
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- 1307 Resting State Cerebral Function in Major Depressive Disorder Patients with and without Suicide**
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- 1308 Abnormal Inner-interaction of Salience Network in Adults with Posttraumatic Stress Disorder**
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- 1309 Discriminating unipolar and bipolar depression by means of VBM and pattern recognition**
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- 1310 Gray Matter Volume Correlates of Autobiographical Memory Deficits in Depression and Depression Risk**
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- 1311 Differential subcallosal cingulate connectivity patterns in anorexia nervosa patients**
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- 1312 Inflammation associated disruption of striatal functional connectivity in depression**
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- 1313 Neurofunctional Substrates of Uncertainty and Ambiguity Processing in High and Low Worriers**
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- 1314 Default mode changes in veterans with PTSD after real-time fMRI neurofeedback training of amygdala**
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- 1315 Prominence of emotional networks in the network organization of high neurotic individuals**
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- 1316 Dissociation of Glutamate and Cortical Thickness in Major Depressive Disorder**
Meng Li¹, Coraline Metzger², Wenjing Li^{3,4}, Adam Safron⁵, Marie-José van Tol⁶, Anton Lord⁷, Viola Borchardt⁷, Weiqiang Dou⁸, Axel Genz², Hans-Jochen Heinze¹, Huiguang He⁴, Martin Walter^{1,2,7}
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- 1317 Dopaminergic reward-learning signals in recurrent depression**
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- 1318 Regional brain volume and functional abnormalities in major depressive disorder: an integrated study**
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- 1319 Functional disconnection of temporal and subgenual cortices predicts recurrence of depression**
Karen Lythe¹, Jorge Moll², Jenny Gethin¹, Clifford Workman¹, Sophie Green¹, JF William Deakin¹, Rebecca Elliott¹, Roland Zahn^{3,4}
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- 1320 Hedonic tone is associated with left supero-lateral medial forebrain bundle microstructure**
Tobias Bracht¹, Amie Doidge¹, Paul Keedwell², Derek Jones¹
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- 1321 Brain Activation during Self-Reflection in Bipolar Disorder**
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- 1322 Impaired Fronto-Limbic Connectivity in Euthymic Bipolar Patients: A Combined Resting-State/DTI Study**
Pauline Favre¹, Monica Baciut¹, Cedric Pichat¹, Thierry Bougerol², Mircea Polosan²
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- 1323 The neural substrates of symptom provocation in dental phobia: a crossmodal comparison study**
Ricarda Evens¹, Kevin Hilbert¹, Nina Maslowski¹, Hans-Ulrich Wittchen¹, Ulrike Lueken¹
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- 1324 Alterations in White Matter Tracts in Veterans with versus without PTSD and Healthy Controls**
Mitzy Kennis^{1,2}, Sanne van Rooij^{1,2}, Do Tromp³, Arthur Rademaker², Ned Kalin³, René Kahn¹, Elbert Geuze^{2,1}
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- 1325 Lithium enhances the neural response to reward in healthy volunteers**
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- 1326 How psychotherapy changes brain functioning: an ALE meta-analysis**
Irene Messina¹, Marco Sambin², Roberto Viviani³
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- 1327 Electrophysiological correlates of self-blaming bias in remitted major depressive disorder**
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- 1328 Comparing emotion regulation deficits in Bipolar I and Bipolar II Disorder**
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- 1329 Precision of Neuronal Representations during Fear Generalization**
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- 1330 A Multivariate Comparison Of Intrinsic Brain Networks In Major Depression**
Eleonora Visintin^{1,2}, Fabio Sambataro², Nadja Doerig^{3,4}, Janis Brakowski⁵, Martin grosse Holtforth^{3,5}, Erich Seifritz^{6,4,7}, Simona Spinelli^{4,7,8}
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- 1331 Difference in Choline/Creatine Ratio in Left Thalamus Between Unipolar and Bipolar Disorder Patients**
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- 1332 Insular and hippocampal gray matter volume reductions in patients with major depressive disorder**
Miriam Stratmann¹, Harald Kugel², Axel Krug¹, Schöning Sonja³, Patricia Ohrmann³, Christina Uhlmann³, Christian Postert⁴, Thomas Suslow⁵, Walter Heindel², Volker Arolt³, Tilo Kircher¹, Udo Dannlowski¹, Carsten Konrad¹
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- 1333 Reduced Default Mode Network Suppression during a Working Memory Task in Remitted Major Depression**
Lucie Bartova¹, Bernhard Meyer², Kersten Diers³, Ulrich Rabl¹, Christian Scharinger¹, Ana Popovic¹, Gerald Pail¹, Klaudius Kalcher¹, Roland Boubela¹, Julia Huemer¹, Christian Windischberger¹, Siegfried Kasper¹, Nicole Praschak-Rieder¹, Ewald Moser¹, Burkhard Brocke³, Lukas Pezawas⁴
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- 1334 L-DOPA augments extinction consolidation and attenuates cued and contextual fear responses in humans**
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- 1335 Effects of benzodiazepines on anterior cingulate cortex activity during experimentally induced panic**
Gregor Leicht¹, Christoph Mulert¹, Daniela Eser-Valeri², Philipp Sämann³, Matthias Ertl¹, Anna Länger², Susanne Karch², Oliver Pogarell², Thomas Meindl⁴, Michael Czisch³, Rainer Rupprecht⁵
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- 1337 Neuroimaging biomarkers in subjects at high genetic risk for bipolar disorder: initial results**
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- 1338 Adolescents with MDD show maturational differences in the thalamus and pregenual anterior cingulate**
Cindy Hagan¹, Julia Graham¹, Roger Tait¹, Barry Widmer¹, Adrienne van Nieuwenhuizen¹, Cinly Ooi¹, Kirstie Whitaker¹, Tiago Simas¹, Edward Bullmore¹, Belinda Lennox², Barbara Sahakian¹, Ian Goodyer¹, John Suckling¹
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- 1340 Disrupted intrinsic Functional Connectivity in Bipolar Disorder**
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- 1341 Abnormal salience network in adolescents with trait anxiety personality**
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- 1342 Towards therapy in a scanner: enhancing fear regulation in spider phobia through fMRI neurofeedback**
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- 1343 Hyper-functionality of visual cortices of SAD patients**
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- 1344 Abnormal NAcc activation to reward is related to altered resting-state connectivity in depression**
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- 1345 Altered Theory of Mind network processing in bipolar disorder**
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- 1346 Behavioral and neural correlates of self-focused emotion regulation in social anxiety disorder**
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- 1347 Disrupted topological organization of white matter networks in major depressive disorder**
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- 1348 Altered Connectivity of the Default Mode Network During Rumination in Depression**
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- 1349 Memory impairments in bipolar disorder are associated with functional brain alterations**
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- 1350 Resting-State Functional Disconnection of a Temporo-Fronto-Limbic Network in Remitted Depression**
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- 1351 Task-dependent modulation of amygdala connectivity in social anxiety disorder patients**
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- 1353** **Childhood sexual abuse in women — whole brain analysis in an epidemiological sample**
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- 1354** **(S)-citalopram influences amygdalar modulation in healthy subjects demonstrated by DCM for fMRI**
Ronald Sladky¹, Marie Spies², André Hoffmann¹, Georg Kranz², Allan Hummer¹, Gregor Gryglewski², Rupert Lanzenberger², Christian Windischberger¹, Siegfried Kasper²
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- 1355** **Disrupted reinforcement learning in Posttraumatic Stress Disorder**
Vanessa Brown^{1,2,3}, John Wang^{1,2,3}, Lusha Zhu^{1,3}, Brooks King-Casas^{1,2,3,4,5}, Pearl Chiu^{1,2,3,4}
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- 1356** **Effects of maternal postnatal depression on offspring autobiographical memory systems 21 years later**
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- 1357** **Reduced discrimination between fear relevant and irrelevant stimuli in early visual cortex in PTSD**
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- 1358** **Course predicting value of hippocampal activation during emotional word encoding in major depression**
Hui Ai¹, Esther Opmeer¹, Dick Veltman², Nic van der Wee³, Mark van Buchem⁴, A. Aleman¹, Marie-Jose van Tol¹
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- 1359** **Effects of electroconvulsive therapy on white matter integrity — a diffusion tensor imaging study**
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- 1360** **Differential behavioral and neural effects of tryptophan and catecholamine depletion in depression**
Philipp Homan¹, Alexander Neumeister², Allison Nugent³, Wayne Drevets⁴, Gregor Hasler¹
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- 1361** **Neural circuitry underlying major depression and marijuana use investigated with fMRI**
Kristen Ford¹, R. W. J. Neufeld¹, Derek Mitchell¹, Jean Théberge¹, Peter Williamson¹, Elizabeth Osuch¹
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- 1362 Is sensory processing of affective prosody a characteristic of major depression?**
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- 1363 ENIGMA Bipolar disorder working group findings from 1,747 cases and 2,615 controls**
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- 1364 Effects of psychotherapy and pharmacotherapy on mentalizing network function in chronic depression**
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- 1365 Abnormal development of amygdala intrinsic activity in rat maternal maltreatment**
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- 1366 Common and distinct functional alterations across anxiety disorders: An ALE meta-analysis**
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- 1367 Pregenual anterior cingulate connectivity modulated by glutamatergic metabolite and major depression**
Liliana Ramona Demenescu¹, Meng Li², Lejla Colic³, Coraline Metzger⁴, Martin Walter⁴
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- 1368 Electroconvulsive therapy induces dissociative brain plasticity in severe depression disorder**
Hui Xu¹, Xiaopeng Hu², Longxiang Tao², Yanghua Tian³, Kai Wang³, Qiang Wei³, Yongqiang Yu², Liang Wang¹
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- 1369 Mindfulness Based Stress Reduction correlates with frontal lobe changes during mood induction fMRI**
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Natasha Marrus¹, Andy Belden², Joan Luby², Deanna Barch³, Tomoyuki Nishino², Ted Handler⁴, Kelly Botteron⁵
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- 1371 Brain areas with Strong Connectivity during Emotion Processing Correlate with Antidepressant Outcome**
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- 1372 Default Mode Network Connectivity in Pediatric PTSD**
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- 1373 Neural correlates of attentional bias in social anxiety disorder**
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- 1374 Electroconvulsive therapy mediated changes in cortical thickness in major depression**
Tara Pirnia¹, Jacqueline Khalil¹, Shantanu Joshi¹, Amber Leaver¹, Roger Woods², Randall Espinoza², Katherine Narr²
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- 1375 Cerebral mediation of cognitive emotion regulation during laughter perception in social anxiety**
Benjamin Kreifelts¹, Carolin Brück², Thomas Ethofer², Jan Ritter², Lena Weigel², Michael Erb³, Dirk Wildgruber²
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- 1376 Intrinsic activity in cortico-limbic networks predicts ECT response in major depression**
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- 1377 Effect of Electroconvulsive Therapy on Striatal Volumes in Major Depressive Disorder**
Benjamin Wade¹, Shantanu Joshi², Tara Pirnia², Amber Leaver², Roger Woods³, Paul Thompson¹, Randall Espinoza³, Katherine Narr²
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- 1378 Frontal ERP correlates of attentional bias to threat words in high trait anxiety individuals**
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Christina Young¹, Robin Nusslock¹, Jennifer Keller², Tianwen Chen², Alan Schatzberg², Vinod Menon²
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- 1380 1H-MR-spectroscopy probed as predictor of treatment response to venlafaxine in major depression**
Philipp Sämann¹, Rosa Schirmer¹, Thomas Nickel¹, Tanja Brückl¹, Marcus Ising¹, Michael Czisch¹
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- 1381 Understanding Major Depression Using Dynamic Models based on N-Body Simulations**
Gautam Prasad^{1,2}, Josh Burkart³, Matthew Sacchet⁴, Lara Foland-Ross⁵, Paul Thompson⁶, Ian Gotlib⁵
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- 1382 Prolonged attenuation of striatal response to positive feedback after acute psycho-social stress**
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- 1383 Classifying Major Depression Using Brain Connectivity with Augmented Data from Alzheimer's Disease**
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- 1384 Optimizing Brain Connectivity Classification of Major Depression Using EPIC**
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- 1385 Geriatric Depression and White Matter Integrity in Alzheimer's Disease Patients**
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Higher Cognitive Functions

DECISION MAKING

- 1386 Lateral prefrontal-parietal network mediates the impact of future imagination on delay discounting**
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Julian Lim¹, How Hwee Ong¹, Yoanna Kurnianingsih¹, Frances-Catherine Quevenco¹, Kenneth Kwok¹, O'Daniel Mullette-Gillman¹
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- 1389 Lie in a spontaneous way**
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- 1391 Implicit markers reveal a lack of self-control conflict during food choice in weight-concerned women**
Laura N. Van Der Laan¹, Denise T. D. De Ridder², Lisette Charbonnier¹, Max A. Viergever¹, Paul. A. M. Smeets^{1,3}
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- 1392 A Bayesian attractor model for continued perceptual decision making**
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- 1393 Oscillatory EEG activity in the beta-band reflects tactile decision-making**
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- 1394 Information on volatility influences adaptive behavior and feedback-related negativity**
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Marco Wittmann¹, Nils Kolling¹, Rei Akaishi¹, Bolton Chau¹, Joshua Brown², Natalie Nelissen¹, Matthew Rushworth¹
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- 1396 Deep brain stimulation of human nucleus accumbens increases impulsive choice**
Jan Peters^{1,2}, Leonhard Schilbach³, Thomas Schuller³, Verle Visser-Vandewalle⁴, Doris Lenartz⁴, Jens Kuhn³
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- 1397 Oscillatory Activity in cortical Networks during Tactile Perceptual Decision-Making**
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- 1398 5-HTTLPR Modulates the Neural Activation of Ventromedial Prefrontal Cortex in Loss Aversion**
Qinghua He¹, Gui Xue², Chunhui Chen², Chuansheng Chen³, Qi Dong², Antoine Bechara⁴
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- 1399 Oscillatory brain activity as predictors of efficiency of convergent and divergent thinking**
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- 1400 Spatiotemporal EEG Signatures Differentiating Baseball Players from Non-players**
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- 1401 Prefrontal signatures of hierarchies of implicit predictions**
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Bernhard Spitzer¹
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- 1406 Amygdala activity correlates with the transition from saliency-based to reward-based choices**
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- 1407 Intranasal oxytocin influences the reward system during decision-making: a pilot-study**
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- 1408 Loss-aversion in the resting brain**
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- 1409 Sustaining exploration during value-based learning with frontopolar brain stimulation**
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- 1410 Neural Correlates of Reward and Risk Prediction Error in Rule Learning during Decision Making**
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- 1412 Presynaptic dopamine modulates behavioral and neural correlates of model-based choices**
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- 1414 Competing neural mechanisms of decision-making with changing risk pressure**
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- 1415 Dynamic risk control by human nucleus accumbens**
Parashkev Nachev¹, Fernando Lopez-Sosa², Javier J. Gonzalez-Rosa², Fernando Rascon³, JJ Lopez-Ibor⁴, Juan Barcia³, Bryan Strange²
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- 1417 Neural Mechanisms of Hierarchical Reinforcement Learning during Navigation**
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- 1418 Cholinergic enhancement increases connectivity between midbrain and hippocampus**
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Caroline Seer¹, Florian Lange¹, Moritz Boos¹, Reinhard Dengler¹, Bruno Kopp¹
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- 1423 Neural oscillations support evidence accumulation in perceptual and value-based decision-making**
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David Meder¹, Brian Haagenzen¹, Tobias Morville¹, Sofie Gelskov¹, Damian Herz¹, Beata Diomsina^{2,3}, Mark Christensen^{4,5}, Kristoffer Hougaard Madsen¹, Oliver Hulme¹, Hartwig Siebner¹
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- 1425 PpTMS reveals probability-dependent changes in connectivity between rIFC-M1 on go/nogo task**
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- 1426 The neural representation of immediate and delayed rewards during inter-temporal choice**
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Chiara Crespi¹, Alessandra Dodich¹, Daniella Laureiro-Martinez², Nicola Canessa¹, Stefano Brusoni², Maurizio Zollo³, Andrea Falini¹, Stefano Cappa⁴
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- 1428 Distinct roles of the medial and lateral prefrontal cortices in model-based decisions**
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- 1429 Overweight subjects hyperactivate during challenging food choices**
Lisette Charbonnier¹, Max Viergever¹, Paul Smeets²
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- 1430 Overriding bad dietary recommendations increases BOLD activity in dIPFC**
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- 1431 Dissociable neural responses to independent sources of perceptual uncertainty**
Elizabeth Michael¹, Annika Boldt¹, Christopher Summerfield¹
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- 1432 Neural Mechanisms of Reliability-Weighted Evidence Integration**
Hannah Tickle¹, Elizabeth Michael², Maarten Speekenbrink¹, Christopher Summerfield²
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Elizabeth Martin¹, Anastasia Christakou¹, Judi Ellis¹, Carlen van Reekum¹
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Elsa Fouragnan¹, Chris Retzler¹, Karen Julia Mullinger^{2,3}, Marios Philiastides¹
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- 1436 Neural Correlates of Behavioral Preferences for Familiar and Novel Brands**
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- 1440 Neuropeptide Y and Perseverance Modulate Brain Responses Linked to Decision-making**
Lucas Broster¹, Ali Khan², Ruolei Gu³, Shonna Jenkins², Richard Kryscio², Thomas Kelly⁴, Donald Lynam², C DeWall², Richard Milich², Michael Bardo², Steven Estus², Yang Jiang¹
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- 1441 Relationship Between Hemodynamic and Behavioral Responses during a Stroop Task using fNIRS**
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Gerhard Jocham¹, Tilmann Klein², Markus Ullsperger¹
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Satoshi Umeda¹, Neil Harrison², Marcus Gray³, Christopher Mathias⁴, Hugo Critchley⁵
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Swetha Shankar¹, Andrew Kayser²
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Katharine Thakkar^{1,2}, Fiona van den Heiligenberg^{1,2}, Sebastiaan Neggers^{1,2}, René Kahn^{1,2}
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Tobias Otto¹, Fred Zijlstra¹, Rainer Goebel¹
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Nancy Lee¹, LIV CLASEN², GREGORY WALLACE³, Armin Raznahan⁴, Jay Giedd⁵
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Ian Cameron¹, Justin Riddle¹, Mark D'Esposito¹
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Florian Lange¹, Caroline Seer¹, Mareike Finke², Reinhard Dengler¹, Bruno Kopp¹
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Jordan Pierce¹, Brett McCordell¹, Joseph Coppiano¹, Amanda Rodrigue¹, David Schaeffer¹, Jennifer McDowell¹
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- 1460 Neural Correlates of Interference Control in Simon Task in Bilingual and Monolingual Elderly**
Ladan Ghazi Saidi¹, Daniel Adrover-Roig², Ana-Ines Ansaldo³
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Roland Pfister¹, Katharina Schwarz², Robert Wirth¹, Marco Steinhauser³, Wilfried Kunde¹
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Benedikt Sundermann¹, Anja Teuber², Harald Kugel¹, Heike Wersching², Klaus Berger², Walter Heindel¹, Bettina Pfeleiderer¹
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Jessica Church¹, Silvia Bunge², Steven Petersen³, Bradley Schlaggar³
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Jason Chan¹, Aaron Kucyi², Joseph DeSouza³
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Lena Paschke^{1,2,3,4}, Henrik Walter^{1,2,4}, Rosa Steimke^{1,2,3}, Vera Ludwig^{1,2,3}, Robert Gaschler^{1,5}, Torsten Schubert^{2,3}, Christine Stelzel^{1,2,3,4}
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- 1467 Dual task activations during nine different bimodal tasks**
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- 1469 Inferior frontal junction and insula as core regions for inhibitory control: an ALE meta-analysis**
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- 1470 The Pre-supplementary Motor Area and Right Inferior Frontal Gyrus in Response Inhibition**
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- 1471 Neural Representations of Emotion Regulation Strategies: Prediction of Successful Reappraisal Use**
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- 1472 Crucial dissociation between behavioral, autonomic and neural indices of concealed information**
Kristina Suchotzki^{1,2}, Bruno Verschuere^{3,1,4}, Judith Peth², Geert Crombez¹, Matthias Gamer²
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Nils Muhlert¹, Frederic Boy², Andrew Lawrence³
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J. Bruce Morton¹, Kyle Logie-Hagen¹, R. Matthew Hutchison²
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Eric Woodcock¹, Richard White¹, Vaibhav Diwadkar¹
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Anita Barber¹, Brian Caffo², James Pekar¹, Stewart Mostofsky¹
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Weizhi Nan¹, Kai Wang¹, Hongbin Wang², Xun Liu¹
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- 1482 Neural correlates of objective and subjective proactive inhibition**
*Matthijs Vink*¹, *Reinoud Kaldewaij*¹, *Stéfan Du Plessis*², *René Kahn*¹
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- 1483 Inferior frontal contribution to attention reorientation versus response inhibition**
Anne Rudolf^{1,2}, *Christian Fiebach*^{1,2}
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- 1484 Time-frequency Group Independent Components Underlying Inhibition in a Modified Stop Signal Paradigm**
Christina Lavalley^{1,2}, *Marie-Theres Meemken*³, *Signe Schneider*¹, *Christoph Herrmann*^{1,2,4}, *René Huster*^{1,2,4}
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- 1485 The neural basis of context-triggered outcome anticipation in goal-directed action**
*Steffi Frimmel*¹, *Uta Wolfensteller*¹, *Hannes Ruge*¹
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- 1486 Thinking and acting: Shared neural processes support semantic control and action understanding**
*James Davey*¹, *Shirley-Ann Rueschemeyer*¹, *Alison Costigan*¹, *Nicholas Murphy*¹, *Katya Krieger-Redwood*¹, *Glyn Hallam*¹, *Hannah Thompson*¹, *Elizabeth Jefferies*¹
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- 1487 EEG Evidence of Target Processing between Voluntary and Instructed Task Switching paradigms**
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- 1488 Behavioral correlates of brain activity in response inhibition: role of performance variability**
*Paola Fuentes Claramonte*¹, *Aina Rodríguez Pujadas*¹, *Noelia Ventura-Campos*², *Victor Costumero*², *Juan Bustamante*³, *Patricia Rosell-Negre*⁴, *César Ávila*⁵, *Alfonso Barrós-Loscertales*⁵
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- 1489 Temporal dynamics of post-error adaptations: dissociation between early and late oscillatory effects**
*Egbert Hartstra*¹, *Arjen Stolk*¹, *Rogier Mars*², *Ivan Toni*¹, *Markus Ullsperger*¹
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- 1490 Stockings of Cambridge could be a good indicator of brain injury in cerebral palsy**
Olga Laporta-Hoyos¹, Júlia Ballester-Plané¹, Ana Narberhaus¹, Leire Zubiaurre-Elorza², Alfons Macaya³, Elida Vázquez³, Ignacio Delgado³, Pilar Póo⁴, María Eugenia Russi⁴, Mar Meléndez³, Teresa Castelló³, Violeta Tenorio⁵, Dolores Segarra^{1,6}, Roser Pueyo^{1,6}
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- 1491 ACC folding predicts inhibitory control during childhood: a longitudinal study**
Arnaud Cachia¹, Grégoire Borst¹, Cloélia Tissier¹, Julie Vidal¹, Grégory Simon¹, Clara Fischer², Arlette Pineau¹, Nicolas Poiriel¹, Jean-François Mangin², Olivier Houdé¹
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- 1492 The Influence of Emotional Valence and Arousal on a Stroop Task**
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- 1493 Stimulus Valence and Emotion Regulation Influence Sustained Brain Activation in Task-Rest Switching**
Jan-Peter Lamke¹, Judith Daniels², Denise Dörfel¹, Michael Gaebler¹, Rasha Abdel Rahman³, Falk Hummel⁴, Susanne Erk¹, Henrik Walter¹
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- 1494 A Quantitative Meta-Analysis on Functional Imaging Results in the Tower of London Task**
Kai Nitschke^{1,2,3,4}, Lisa Finkel^{5,2}, Lena Koesterling^{6,2,3}, Cornelius Weiller^{5,2,4}, Christoph Kaller^{7,2,4}
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- 1495 Intrinsic brain organization underlying impulsivity**
Johannes Golcher¹, Krzysztof Gorgolewski², Mark Lauckner¹, Alexander Schaefer¹, Judy Kipping³, Jonathan Smallwood⁴, Daniel Margulies¹
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- 1496 Do acquisition and transfer of a new strategy require conscious perception of the critical stimuli?**
Imen El Karoui¹, Kalliopi Christoforidis¹, Lionel Naccache¹
¹Institut du Cerveau et de la Moelle, Paris, France
- 1497 Fractional anisotropy in right hemisphere tracts predicts speed of saccade execution and inhibition**
Fiona van den Heiligenberg^{1,2}, Katharine Thakkar¹, Sebastiaan Neggers¹
¹University Medical Center Utrecht, Utrecht, the Netherlands, ²FMRIB Centre, Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, United Kingdom
- 1498 Increased low-frequency phase synchronization during set-shifting in soldiers with PTSD**
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- 1499 Cognitive Control of Emotion and Action: Similar But Not the Same — An ALE Meta-Analysis**
Robert Langner^{1,2}, Simon Eickhoff^{1,2}, Susanne Leiberg³
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- 1500 Risk tendency, impulsivity, and response inhibition in emotional contexts investigated with fMRI**
Matthew Brown¹, James Benoit², Michal Juhas², R Lebel², Alan Carroll², Florin Dolcos³, Esther Fujiwara², Oleksandr Hodlevskyy², Hannah Pazderka⁴, Peter Silverstone², T Wild², Alan Wilman², Serdar Dursun², Andrew Greenshaw²
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- 1501 Cognitive and affective control in a flanker word task: Common and dissociable brain mechanisms**
Sonia Alguacil Sánchez¹, Pío Tudela Garmendia¹, María Ruz Cámara¹
¹University of Granada, Granada, Spain
- 1502 Analysis of simultaneous EEG/fMRI reveals neurophysiological phenotypes of impulse control**
Oliver Tuescher^{1,2}, Lena Schmueser¹, Alexandra Sebastian¹, Arian Mobascher¹, Klaus Lieb¹, Bernd Feige²
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- 1503 Self-regulation of frontal-midline theta in schizophrenic patients**
Stefanie Enriquez-Geppert^{1,2}, René Huster³, Joanna Szpiczakowski⁴, Christian Figge⁵, Jörg Zimmermann⁶, Christoph Herrmann⁴
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- 1504 The Emotional Card Sorting Test: exploring the neural correlates of emotion-cognition-interactions**
Elisa Kreienkamp¹, Nils Kohn², Ute Habel³, Katharina Pauly⁴
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- 1505 The Default-Mode Network is not Always in Default Mode**
Amanda Elton¹, Wei Gao²
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- 1506 Functional and effective connectivity underlying behavioral inhibition**
René Huster¹, Sergey Plis², Christina Lavalée¹, Vince D. Calhoun³, Christoph Herrmann⁴
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- 1507 TMS to preSMA at rest induces activity in frontal-basal-ganglia network that influences inhibition**
Benjamin Xu¹, Wen-Tung Wang², Oluwale Awosika², John Butman³, Joelle Sarlls², Eric Wassermann⁴, Leonardo Cohen⁵, Marco Sandrini¹
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- 1508 A causal role for posterior parietal cortex in contextual modulation of cognitive control**
Joseph King¹, Franziska Korb¹, Tobias Egner²
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- 1509 Neural Correlates of Mental Effort During Task Switching in Fatigued Students**
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- 1510 Model-based VLSM: combining computational cognitive modeling with voxel-based lesion symptom mapping**
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- 1511 Executive Function and Intrinsic Functional Connectivity of Anterior Insula in Children with ADHD**
Jesse Jun¹, F. Xavier Castellanos¹, Clare Kelly¹
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- 1512 “Can machines think?” fMRI study of the Turing Test**
Laura Cuaya¹, Luis Concha¹
¹Universidad Nacional Autonoma de Mexico, Queretaro, Mexico
- 1513 Cognitive specialization of dorsal prefrontal cortical networks**
Sabine Oligschläger¹, Krzysztof Gorgolewski², Joachim Böttger³, Johannes Golchert¹, Mark Lauckner¹, Alexander Schäfer⁴, Judy Kipping⁵, Jonathan Smallwood⁶, Daniel Margulies¹
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IMAGERY

- 1514 Effects of the Psychedelic Ayahuasca Over the Thalamus-Neocortex Functional Connectivity**
Kátia Andrade¹, Jose Alexandre Crippa², Dráulio de Araújo¹, Jaime Hallak², Fernanda Palhano-Fontes¹, Sidarta Ribeiro¹
¹Brain Institute, Natal, Brazil, ²University of São Paulo, São Paulo, Brazil
- 1515 Motor imagery as a modality of skill acquisition: Source analysis of motor execution and imagery**
Sarah Kraeutner¹, Alicia Gionfriddo², Timothy Bardouille³, Shaun Boe²
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- 1516 Decoding imagined visual motion in different directions using high spatial resolution 7 Tesla fMRI**
Thomas Emmerling¹, Jan Zimmermann², Martin Frost², Bettina Sorger², Rainer Goebel²
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- 1517 Laterality of motor imagery based brain activity is modulated by real-time neurofeedback**
Alicia Gionfriddo^{1,2}, Sarah Kraeutner^{1,3}, Timothy Bardouille^{4,5,6}, Shaun Boe^{1,2,3,7,8,9}
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- 1518 A somatotopically specific tactile imagery paradigm for fMRI Brain Computer Interface applications**
Amanda Kaas^{1,2}, Rainer Goebel^{1,2,3}, Mona Rosenke¹, Bettina Sorger^{1,2}
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- 1519 Brain Activity during Mental Imagery of Reaching-to-Grasp in a Congenitally Amputated Patient**
Katarzyna Kisiel-Sajewicz¹, Jaskólska Anna¹, Jarosław Marusiak¹, Łukasz Szumowski¹, Artur Marchewka², Katarzyna Jednoróg³, Zhiguo Jiang^{4,5}, Guang Yue⁴, Artur Jaskólski¹
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- 1520 The level of force influences the corticospinal excitability during imagined actions**
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- 1521 Exploration of a motor imagery task for BCI systems and detection of awareness in DOC patients**
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- 1522 EEG spectral power differences in group with predominant verbal and imaginative thinking style**
Zhanna Nagornova¹, Natalia Shemyakina²
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- 1523 Brain Activity during Motor Imagery in Multiple Sclerosis**
Roxana Teodorescu¹, Giampaolo Brichetto², Andrea Tacchino², Luca Roccatagliata³, Giulia Bommarito³, Christian Cordano³, Mario Battaglia⁴, Gianluigi Mancardi³, Matilde Inglese⁵
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- 1524 Functional architecture of the brain during mental rotation of hands: a study of 145 right-handers**
Sanja Budisavljevic¹, Nathalie Tzourio-Mazoyer¹, Gaëlle Leroux¹, Laurent Petit¹, Marc Joliot¹, Gael Jobard¹, Guy Perchey¹, Fabrice Crivello¹, Laure Zago¹, Bernard Mazoyer¹, Emmanuel Mellet¹
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- 1525 Detecting Hemodynamic Response during Executive Motor Task and Motor Imagery using fNIRS**
Seda Dumlu¹, Firat Şansal¹, Yunus Engin Gokdag¹, Sinem Burcu ERDOĞAN¹, Ozge Yilmaz², Yasemin Keskin-Ergen³, Ata Akin²
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- 1526 Neural correlates of generalization learning in post-stroke patients: A pilot study**
Chetwyn Chan¹, Shannon Jia², Tatia Lee³, Karen Liu⁴, Qin Tao¹, Yi Wu²
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- MUSIC**
- 1527 Auditory Cortex in Musicians with Absolute Pitch: Deformation-based Shape Analysis**
Seung-Goo Kim¹, Johannes Stelzer¹, Katrin Schulze², Adrian Viehweger³, Thomas Knösche¹
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- 1528 The Simulation of Amusia via Confidence Fools Behaviour, Not the Brain**
Dominique Vuvar¹, Benjamin Zendel², Isabelle Peretz¹
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- 1529 Feeling the Groove: Perceiving Asynchronies in the Drumming Section of a Brazilian Samba School**
Annerose Engel^{1,2}, Sebastian Hoefle¹, Marina Monteiro¹, Ivanei Bramati¹, Débora Lima¹, Peter Keller^{3,2}, Jorge Moll¹
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- 1530 The influence of rhythm structure on auditory-motor interaction during listening to simple singing**
Monika Jungblut¹, Monika Pustelniak², Ralph Schnitker³, Walter Huber⁴
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- 1531 Detection of the arcuate fasciculus in congenital amusia depends on the tractography algorithm**
Joyce Chen^{1,2}, Sukhbinder Kumar^{3,4}, Victoria Williamson^{5,6}, Jan Scholz⁷, Timothy Griffiths^{3,4}, Lauren Stewart⁸
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- 1532 A combined EEG — MEG study on the effects of musical training in multisensory magnitude comparisons**
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- 1533 Musicians and non-musicians differ in EEG-alpha band activity in response to emotional sounds**
Sophie Nolden^{1,2}, Simon Rigoulot^{1,3,4}, Pierre Jolicoeur^{1,2,5}, Jorge Armony^{1,3,4}
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- 1534 Differences of auditory-evoked potentials between nonmusicians and musicians**
Li Zhang¹, Li Hu¹
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- 1535 Music Processing: Brain Response to Hierarchical Structures in Music and Comparison to Speech**
Yulia Lerner¹, Morwared Farbood², David Heeger², Gary Marcus², Uri Hasson³
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- 1536 Focused attention reveals cortical specialization for music and speech processing**
Mathias Oechslin^{1,2}, Lutz Jäncke^{1,2,3}, Martin Meyer^{1,3,4}
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- 1537 FMRI evidence of separated neural resources for tonal and verbal memory in congenital amusia**
Philippe Albouy^{1,2,3}, Isabelle Peretz³, Patrick Bermudez^{2,3}, Robert Zatorre^{2,3}, Barbara Tillmann¹, Anne Caclin¹
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- 1538 Measuring and Classifying Musical Engagement using EEG and Motion Capture**
Grace Leslie^{1,2}, Alejandro Ojeda³, Scott Makeig⁴
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- 1539 Verbal and executive abilities enhanced by cortical signal complexity post short-term music training**
Sarah Carpentier¹, Sylvain Moreno¹, Anthony McIntosh¹
¹Rotman Research Institute, Baycrest Centre, Toronto, Canada

REASONING AND PROBLEM SOLVING

- 1540** **Transcranial direct current stimulation over the parietal cortex modulates arithmetic learning**
Roland Grabner¹, Bruno Rüttsche², Christian Ruff³, Tobias Hauser⁴
¹Georg-Elias-Müller-Institute of Psychology, Georg-August-University of Göttingen, Göttingen, Germany, ²ETH Zurich, Zurich, Switzerland, ³University of Zurich, Zurich, Switzerland, ⁴University Clinics for Child and Adolescent Psychiatry (UCCAP), University of Zurich, Zurich, Switzerland
- 1541** **The relationship between finger gnosis and arithmetic: a VBM analysis**
Morgan Newman¹, Roy Seo¹, Sharlene Newman¹
¹Indiana University, Bloomington, IN
- 1542** **Does finger sense play a role in number processing? Evidence from fMRI**
Sharlene Newman¹, Roy Seo¹
¹Indiana University, Bloomington, IN
- 1543** **Neural bases of human strategic reasoning from functional MRI study**
Jong-Hwan Lee¹, Hyun-Chul Kim¹, Zun Zhang², Soo-Young Lee³
¹Korea University, Seoul, Korea, Republic of, ²University of Michigan, Ann Arbor, United States, ³KAIST, Daejeon, Korea, Republic of
- 1544** **The neural substrate of analogical reasoning in Mandarin: an fMRI study**
Fan-pei Yang¹, P. H. Lu², T. H. Lu³, Yu-Ling Tsai³, Yi-Han Wu³
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- 1545** **Left frontal pole morphometry predicts analogical reasoning abilities**
Clarisse Aichelburg¹, Marika Urbanski¹, Michel Thiebaut de Schotten², Richard Levy¹, Emmanuelle Volle¹
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- 1546** **Processing of indeterminacy in reasoning with cardinal directions**
Simon Maier¹, Thomas Fangmeier¹, Marco Ragni¹
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- 1547** **The role of the posterior parietal cortex in deductive reasoning — a TMS study**
Imke Franzmeier¹, Evelyn Ferstl¹, Simon Maier¹, Marco Ragni¹
¹Center for Cognitive Science University of Freiburg, Freiburg, Germany
- 1548** **Processing of Visual Hierarchies within Broca: Novel Insight from Functional Connectivity**
Florian Fischmeister^{1,2}, Mauricio Martins³, Estela Puig-Waldmueller³, Jinook Oh³, Alexander Geissler^{1,2}, Roland Beisteiner^{1,2}, Tecumseh Fitch³
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- 1549** **Discrimination of self-similar visual hierarchies activates the parieto-medial temporal pathway**
Mauricio Martins¹, Florian Fischmeister^{2,3}, Estela Puig-Waldmueller¹, Jinook Oh¹, Alexander Geissler^{2,3}, Tecumseh Fitch¹, Roland Beisteiner^{2,3}
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- 1550** **Sex Differences in the Relationship between Resting State Network Properties and Creativity**
Sephira Ryman¹, Martijn van den Heuvel², Raneé Flores¹, Andrei Vakhtin¹, Jessica Carrasco¹, Christopher Wertz¹, Rex Jung¹
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- 1551** **Temporally Coherent Brain Network Dynamics During Rest and Fluid Reasoning**
Andrei Vakhtin^{1,2}, Sephira Ryman^{1,2}, Raneé Flores¹, Jessica Carrasco¹, Christopher Wertz¹, Emmaly Owens¹, Rex Jung¹
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- 1552** **Neural mechanisms underlying verification and falsification in human reasoning**
Christopher Summerfield¹, Jan del Ojo Balaguer¹, Maria Ruz²
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1554 Parietal hyper-connectivity and enhanced signal amplitude in children with math disabilities
Dietsje Jolles¹, Sarit Ashkenazi¹, Jennifer Richardson¹, Hui Zhao¹, John Kochalka¹, Tianwen Chen¹, Miriam Rosenberg-Lee¹, Vinod Menon¹
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1555 A Meta-Analysis of Problem Solving Within Mathematical and Verbal Domains
Jessica Bartley¹, Kimberly Ray², Michael Riedel², Julio Yanes¹, Peter Fox², Eric Brewin¹, Angela Laird¹
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1556 Frontal-striatal system underlies children's inter-trial variability during problem solving
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1557 The Role of Finger-based Number Representations in Online Arithmetic Facts Retrieval
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1558 Neuronal Oscillation Amplitudes Reflect Processes Underlying Time Estimation
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1559 Implication of the Posterior Parietal Cortex during Changes in Perspective for Visual Scenes
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1560 Tracking location during complex path integration recruits retrosplenial cortex
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1562 Function-dependent reduction of fractional anisotropy in acute neglect in the left hemisphere
Roza Umarova¹, Tanja-Ute Beier², Valerij Kiselev³, Marco Reiser³, Stefan Kloeppel⁴, Volkmar Glauche¹, Irina Mader⁶, Lena Beume⁶, Cornelius Weiller¹
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1563 Dissociable hippocampal and parietal contributions to children's math fact learning
Miriam Rosenberg-Lee¹, Jennifer Richardson¹, Dietsje Jolles¹, Katherine Cheng¹, Shaoyang Qin¹, Teresa Luculano¹, Vinod Menon¹
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1564 Increase in cortico-striatal circuits for visuospatial processing during mental rotation training
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Sertac Ustun¹, Emre H. Kale¹, Metehan Çiçek¹
¹Ankara University, Ankara, Turkey

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Myrthe Faber¹, Silvia Gennari¹
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- 1567 Neural Mechanisms Underlying Time Perception and Reward Prospect**
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- 1568 A shared neural map architecture underlies capacity limits in both working memory and enumeration**
Andre Knops¹, Manuela Piazza², Rakesh Sengupta³, Evelyn Eger⁴, David Melcher²
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- 1569 Perceptual Carryover Effects in Climbing Neural Activity for Duration**
Martin Wiener¹, James Thompson²
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Emre H. Kale¹, Sertac Ustun¹, Metehan Çiçek¹
¹Ankara University, Ankara, Turkey
- 1571 Neural Correlates of Spatial Knowledge Transfer from Virtual Reality to Reality**
Silvia Kober¹, Manuel Ninaus¹, Carina Höfler¹, Christa Neuper¹, Guilherme Wood¹
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- 1572 A common ventral network for semantic classification**
Korbinian Moeller¹, Klaus Willmes², Elise Klein¹
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- 1573 Sex Differences in BOLD Response During Virtual Navigation: Different Routes to the Same Destination**
Nicole Nowak¹, Wendy Elkins², Susan Resnick², Scott Moffat³
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- 1574 Mathematical Ways of Operating: an fMRI Study with 12-year-old participants**
Anthony Cate¹, Adon Rosen¹, Martha Bell¹, Catherine Ulrich¹, Stephanie Roldan¹, Anderson Norton¹
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- 1575 Successful goal-directed navigation with and without an orienting landmark**
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¹Boston University, Boston, MA, ²Boston University, MGH, Boston, MA
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- 1577 LTE Electromagnetic Field Exposure Modulates the Human Resting-state Functional Connectivity**
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- 1578 Uniting functional and effective connectivity with a model linking correlation and variance changes**
Eugene Duff¹, Mark Woolrich², Tamar Makin², Stephen Smith³
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- 1579 Retrieving the HRF in resting state fMRI: methodology and applications**
Daniele Marinazzo¹, Guorong Wu^{2,3}, Wei Liao⁴, Olivia Gosseries⁵, Steven Laureys⁶
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- 1580 Extensive neurocognitive phenotyping of a single human: The MyConnectome Project**
Russell Poldrack¹, Timothy Laumann², Laurie Frick³, Oluwasanmi Koyejo⁴, Brenda Gregory⁴, Ashleigh Hover⁴, Mei-Yen Chen⁵, Alex Huk⁴, Sung Jun Joo⁴, Daniel Handwerker⁶, Jackson Liang⁴, Ryan Boyd⁴, Zack Booth Simpson⁴, Scott Hunicke-Smith⁴, Thomas Caven⁷, Edward Marcotte⁴, Steven Petersen⁸, Jeanette Mumford⁹
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- 1581 A Versatile Software Package for Inter-subject Correlation Based Analyses of fMRI**
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- 1582 Mapping the most and least stable connections in the brain**
Javier Gonzalez-Castillo¹, Daniel Handwerker¹, Meghan Robinson², Colin Hoy¹, Laura Buchanan¹, Ziad Saad³, Peter Bandettini¹
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- 1583 Relationships between resting state fMRI and EEG brain connectivity across frequency bands**
Fani Deligianni¹, Maria Centeno¹, David Carmichael¹, Jonathan Clayden¹
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- 1584 Default Mode Network is Highly Variable in Resting-State Connections to Task-Positive Networks**
Alireza Sojoudi¹, Bradley Goodyear¹
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- 1585 Reduced BOLD fractional Contributions to Resting-state(RS) Functional Connectivity (FC) above 0.1 Hz**
Jingyuan Chen¹, Gary Glover¹
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- 1586 Stability of salient nodes in resting state fMRI**
Anand Narasimhamurthy¹, Ashish Rao¹, Ek Tsoon Tan², Suresh Joel¹
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- 1587 Resting state correlation reliability and variability in a single subject: The MyConnectome Project**
Timothy Laumann¹, Evan Gordon², Babatunde Adeyemo², Abraham Snyder², Russell Poldrack³, Steven Petersen⁴
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- 1588 Automatic identification of motor and language networks obtained from ICA of resting state fMRI**
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- 1589 ISC-test for sliding window ICA data reveals spatially stable and non-stationary RSN clusters**
Timo Tuovinen¹, Jussi Kantola¹, Tuomo Starck¹, Aapo Hyvärinen², Vesa Kiviniemi¹
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- 1590 Differences in resting state MEG functional connectivity pre and post ketamine in major depression**
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- 1591 Beta testing the GLM: Misleading parameter estimates in studies of functional connectivity**
Ilya Veer¹, Henrik Walter¹, Tom Johnstone²
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- 1592 Cortico-amygdala coupling as a marker of early relapse risk in cocaine-addicted individuals**
Meredith McHugh¹, Catherine Demers², Betty Jo Salmeron¹, Michael Devous, Sr³, Elliot Stein¹, Bryon Adinoff⁴
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- 1593 Physiological Noise Correction Effects on Multi-Site Functional Connectivity Reproducibility**
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- 1594 Reconstructing Brain Resting State Networks and Their Temporal Dynamics from High-resolution EEG**
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- 1595 Surrogate Data Thresholding Approaches in fMRI Time Series Analysis**
Michelle Liou¹, Yi-Li Tseng²
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- 1596 Structured networks observed in resting fMRI “noise”**
Molly Bright¹, Kevin Murphy¹
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- 1597 Hub Identification in Dynamic Resting-State Inter-Network and Intra-Network Functional Connectivity**
Soroosh Afyouni^{1,2}, Joanne Hale², Stephen Mayhew², Theodoros Arvanitis^{1,3}, Andrew Bagshaw²
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- 1598 Examining the Language Network Using Dynamic Factor Analysis: A Resting-State NIRS Study**
Hsin-Chin Chen¹, Ching-Feng Huang², Chung-Ping Cheng³, Peng-Yu Chen¹
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- 1599 Are some individuals’ brains more strongly functionally connected than others?**
Stephen Mayhew¹, Izabela Przewdzik¹, Andrew Bagshaw¹
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- 1600 Resting-State Networks Derived from ECoG and Their Dependence on State of Consciousness**
Jeff Duyn¹, Toru Yanagawa², David Leopold¹, Naotaka Fujii², Xiao Liu³
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- 1601 Handedness shapes brain at rest: evidence from hemodynamic response and connectivity**
Guorong Wu^{1,2}, Wei Liao³, Daniele Marinazzo², Junping Wang⁴, Chunshui Yu⁴, Huaifu Chen¹
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- 1602 Correlation Between Negative BOLD Fluctuation and EEG: A Simultaneous fMRI-EEG Study**
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- 1603 Temporally independent connectivity patterns: A new perspective on study of resting brain dynamics**
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- 1604 How Long is Long Enough: Network Stability in Pediatric Resting-State fMRI**
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- 1605 Sex differences in the temporal dynamics of fMRI resting-state networks**
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- 1606 Frequency-dependency of the Default Mode Network**
André Hoffmann¹, Ronald Sladky¹, Marie Spies², Daniela M. Pfabigan³, Martin Küblböck¹, Anna Höflich², Katharina Pauß, Allan Hummer¹, Georg Kranz², Claus Lamm³, Rupert Lanzenberger², Christian Windischberger¹
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- 1607 A shadow in the dark — what is hidden in GLM residuals? Simultaneous EEG-fMRI alpha rhythm study**
Mateusz Rusiniak¹, Tomasz Wolak¹, Monika Lewandowska¹, Agnieszka Pluta¹, Katarzyna Cieśla¹, Henryk Skarżyński¹
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- 1608 Changes in resting-state functional connectivity in children with prenatal alcohol exposure**
Jia Fan^{1,2}, Paul Taylor^{1,2,3}, Christopher Molteno⁴, Suril Gohel⁵, Bharat Biswal⁵, Sandra Jacobson^{2,4,6}, Joseph Jacobson^{2,4,6}, Ernesta M. Meintjes^{1,2}
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- 1609 Coherence vs. high gamma band activity for defining electrocorticogram functional connectivity**
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- 1610 Evaluating network thresholding methods for fMRI**
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- 1611 Connectivity Patterns of Intrinsic Networks is Associated with Menstrual Phase: A Resting fMRI Study**
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- 1612 ICA within a framework allowing correlation of psychological states: The case of the DMN in pain**
Timothy Meeker¹, Michael Keaser², Shariq Kahn², Rao Gullapalli³, Joel Greenspan⁴, David Seminowicz⁵
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- 1613 Towards a prediction of cognitive deficits via underlying connectivity differences in Schizophrenia**
Kimberly Ray¹, Eswar Damaraju², Michael Riedel³, Vince Calhoun⁴, Angela Uecker⁵, Simon Eickhoff⁶, Peter Fox⁷, Jessica Turner⁸, Angela Laird⁹
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- 1614 Combining Task-evoked And Spontaneous Activity Mapping To Optimize Pre-operative fMRI**
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- 1615 Functional Organization of Language-Related Networks in Resting State**
Qing Cai¹, Yu Zhang², Lise Van der Haegen³, Tianzi Jiang², Marc Brysbaert³
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- 1616 Transcutaneous spinal direct current stimulation alters resting state functional connectivity**
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- 1617 Variability in Resting State fMRI: Two Years inside the Scanner**
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- 1618 BOLD oscillation frequency and amplitude negatively interact in the human visual cortex**
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- 1619 Investigation of thalamus-cortical interaction between eyes open and eyes closes resting states**
Dongqiang Liu¹, Yuan-Yuan Li¹, Bin-Ke Yuan¹, Gong-Jun Ji¹, Yu-Feng Zang¹
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- 1620 Depicting network dynamic patterns related to prior affective state using a data driven approach**
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- 1621 Is natural viewing a reliable alternative to resting state functional connectivity mapping?**
Jaroslav Hlinka¹, Renata Androvičová², Jiří Horáček³, Jiří Lukavský⁴, Jan Rydlo⁵, Jaroslav Tintera⁶, Martin Vejmelka⁷
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- 1622 Retinotopic Organization of Resting-State Fluctuations in the Early Visual Cortex**
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- 1623 Spatio-spectral EEG Patterns of Intrinsic Connectivity Networks revealed by EEG/fMRI Measurements**
Basri Erdogan^{1,2}, Adil Deniz Duru³, Elif Kurt⁴, Ali Bayram⁵, Ahmet Ademoglu⁶, Tamer Demiralp⁷
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- 1624 Reproducibility, reliability, and relevance of dynamic intrinsic functional connectivity**
Zhen Yang¹, Cameron Craddock^{1,2}, Chao-Gan YAN², Michael Milham^{1,2}
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- 1625 Dissipation and resting-state networks in the human brain**
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- 1626 Data-driven dynamic mapping of the brain by genetic programming**
Nicholas Allgaier¹, Joshua Bongard², Christopher Danforth², Robert Whelan², Eric Artiges³, Tobias Banaschewski⁴, Gareth Barker⁵, Arun Bokde⁶, Uli Bromberg⁷, Christian Büchel⁸, Patricia Conrod⁹, Herta Flor⁴, Vincent Frouin¹⁰, Jürgen Gallinat¹¹, Penny Gowland¹², Andreas Heinz¹¹, Bernd Ittermann¹³, Herve Lemaitre¹⁴, Eva Loth⁹, Jean-Luc Martinot³, Ruben MIRANDA³, Frauke Nees¹⁵, Marie-Laure Paillère Martinot³, Tomas Paus¹⁶, Zdenka Pausova¹⁷, Jean-Baptiste Poline¹⁰, Marcella Rietschel⁴, Trevor Robbins¹⁸, Michael Smolka¹⁹, Helene VULSER²⁰, Gunter Schumann⁵, Hugh Garavan², IMAGEN Consortium²¹
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- 1627 Dynamic causal modelling for whole brain networks**
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DIFFUSION MRI MODELING AND ANALYSIS

- 1628 Track Specific Analysis on Children with Brain Tumors Treated with Surgery and Chemotherapy**
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- 1629 Analysis of the Brain Network Properties in Autism**
Min Hee Lee¹, Dong Youn Kim¹, Sang Hyeon Lee¹, Moo Chung², Nagesh Adluru², Richard Davidson²
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- 1630 Extracting a biomarker for the mean cross-sectional area from the ODF**
Rutger Fick¹, Gonzalo Sanguinetti¹, Rachid Deriche¹
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- 1631 A method for evaluating the similarity of HARDI-based fiber tracking methods**
Jian Lin¹, Ken Sakaie¹, Myron Zhang², Katherine Koenig¹, Stephen Jones¹, Mark Lowe¹
¹Cleveland Clinic, Cleveland, OH, United States, ²The Ohio State University College of Medicine, Columbus, OH, United States
- 1632 Fiber bundle shape analysis reveals malformations in Bipolar Disorder**
Zhong Yi Sun^{1,2}, Josselin Houenou^{3,4,5,1}, Delphine Duclap^{6,2}, Samuel Sarrazin⁷, Julia Linke⁸, Michele Wessa⁹, Nora Hamdani¹⁰, Claire Daban¹⁰, Marc-Antoine d'Albis¹⁰, C Cabon¹¹, Pamela Guevara¹², Marine Delavest¹³, F Bellivier¹⁴, Jorge Almeida¹⁵, Amelia Versace¹⁵, K Le Duda¹¹, Cyril Poupon¹⁶, Marion Leboyer¹⁰, Mary Phillips¹⁷, Jean-François Mangin^{18,19}
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- 1633 NODDI with dispersion anisotropy**
Maira Tariq¹, Torben Schneider², Daniel Alexander¹, Claudia Wheeler-Kingshott², Hui Zhang¹
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- 1634 Local estimation of noise standard deviation in MRI images using propagation separation**
Karsten Tabelow¹, Henning Voss², Joerg Polzehl³
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- 1635 Adaptive noise reduction in multi-shell dMRI data with SPM by POAS4SPM**
Karsten Tabelow¹, Siawoosh Mohammadi², Nikolaus Weiskopf³, Joerg Polzehl⁴
¹WIAS, Berlin, Germany, ²Wellcome Trust Centre for Neuroimaging, London, United Kingdom, ³Wellcome Trust Centre for Neuroimaging, Institute of Neurology, UCL, London, United Kingdom, ⁴WIAS Berlin, Berlin, Germany
- 1636 Reproducibility of an Automated Regional Analysis of White Matter with Diffusion Imaging**
Ryan Cabeen¹, Mark Bastin², David Laidlaw¹
¹Computer Science Department, Brown University, Providence, RI, United States, ²University of Edinburgh, Edinburgh, United Kingdom
- 1637 Anisotropic Power Maps: A new diffusion contrast to reveal low anisotropy tissues from HARDI data**
Flavio Dell'Acqua^{1,2}, Luis Lacerda¹, Marco Catani¹, Andrew Simmons^{1,2}
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- 1638 Statistical nonparametric tests for group comparison of Diffusion Tensor Images**
Anne Collard¹, Rodolphe Sepulchre^{2,1}, Christophe Phillips³
¹Department of Electrical Engineering and Computer Science, University of Liège, Liège, Belgium, ²University of Cambridge, Cambridge, United Kingdom, ³Cyclotron Research Centre, University of Liege, Sart Tilman, Liege, Belgium

- 1639 A fast algorithm for interactive automatic segmentation of white matter fibers**
Nicole Labra^{1,2}, Miguel Figueroa^{1,2}, Pamela Guevara¹, Delphine Duclap³, Josselin Houenou⁴, Cyril Poupon⁵, Jean-François Mangin³
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- 1640 The new methods available in Dipy 0.7.0+ that you should know about**
Eleftherios Garyfallidis¹, Ariel Rokem², Bagrat Amirbekian³, Stefan van der Walt⁴, Mauro Zucchelli⁵, Jesus-Omar Ocegueda-Gonzalez⁶, Samuel St-Jean¹, Gabriel Girard¹, Michael Paquette¹, Ian Nimmo-Smith⁷, Matthew Brett⁸, Maxime Descoteaux⁹
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- 1641 High Spatial Resolution White Matter Microstructure with CHARMED and High Performance MRI Gradients**
Matteo Bastiani¹, Silvia De Santis², Derek Jones², Yaniv Assaf³, Alard Roebroeck¹
¹Maastricht University, Maastricht, Netherlands, ²Cardiff University, Cardiff, United Kingdom, ³Tel Aviv University, Tel Aviv, Israel
- 1642 Passing functional messages along fibers to help them cross. MRIGossip: Multimodal tractography**
Dirk Neumann¹, Basile Pinsard², Arnaud Messe², Ralph Adolphs¹, Guillaume Marrelec², David Rudrauf²
¹California Institute of Technology, Pasadena, CA, ²Inserm / UMRS-678, Paris, France
- 1643 Brainnetome dMRI Toolkit: An Integrated Software Package for Analyzing Brain Diffusion MRI Data**
Sangma Xie^{1,2}, Nianming Zuo^{1,2}, Tianzi Jiang^{1,2}
¹Brainnetome Center, Institute of Automation, Chinese Academy of Sciences, BEIJING, China, ²National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, BEIJING, China
- 1644 Convergent and Divergent Individual Differences of White-Matter Networks across Construction Methods**
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- 1645 Evaluation of Principal Diffusion Directions in DTI using Directional Statistics**
Mehmet Özer Metin¹, Didem Gökçay¹
¹Informatics Institute, Department of Medical Informatics, Middle East Technical University, Ankara, Turkey
- 1646 The Continuous Time Random Walk Diffusion Model: Application To Human Brain MRI**
Thomas Barrick¹, Carson Ingo², Christian Lambert¹, Matt Hall³, Richard Magin²
¹St George's, University of London, London, United Kingdom, ²University of Illinois at Chicago, Chicago, IL, ³University College London, London, United Kingdom
- 1647 Comparison of different methods to correct artefacts in diffusion weighted MRI data**
Jan Schreiber¹, Riccardo Cafiero¹, Angela Friederici¹, Alfred Anwander¹
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- 1648 Parcellation-Independent Framework for Analysing Developing Brain Networks Using Reparametrisation**
Markus Schirmer¹, Gareth Ball¹, Serena Counsell¹, A. David Edwards¹, Daniel Rueckert², Joseph V. Hajnal¹, Paul Aljabar¹
¹King's College London, London, United Kingdom, ²Imperial College London, London, United Kingdom
- 1649 Towards Super-Resolved DTI Biomarkers using a Disjoint Shape-Oriented Analysis of Tensors**
H. Ertan Cetinçul¹, Mariappan Nadar¹
¹Siemens Corporation, Corporate Technology, Princeton, NJ
- 1650 White matter microstructure modeling from multi-shell multi-TE diffusion MRI**
Robbert Harms¹, Matteo Bastiani¹, Junqian Xu², Essa Yacoub³, Rainer Goebel¹, Alard Roebroeck¹
¹Maastricht University, Maastricht, Netherlands, ²Icahn School of Medicine, New York, NY, ³University of Minnesota, Minneapolis, United States

- 1651 Topographic comparison of sensory fiber tracks in patients with macular dystrophy and controls**
Anton Beer¹, Maria Stegbauer¹, Tulya Kavaklıoğlu^{1,2}, Tina Plank¹, Mark Greenlee¹
¹University of Regensburg, Regensburg, Germany,
²Max Planck Institute for Psycholinguistics, Nijmegen, Netherlands
- 1652 ROI-free Super-resolution Surface Connectivity Mapping**
Rudolph Pienaar¹, Daniel Haehn², Nicolas Rannou³, Ellen Grant¹
¹Boston Children's Hospital, Harvard Medical School, Boston, MA, ²Children's Hospital Boston, Boston, MA, ³Boston Children's Hospital, Boston, MA
- 1653 Model-based diffusion weighted imaging of response inhibition and response caution**
Renate Thienel¹, Elise Mansfield¹, Patrick Cooper¹, Andrew Heathcote¹, Birte Forstmann², Gavin Cooper¹, Frini Karayanidis¹
¹University of Newcastle, Newcastle, Australia,
²University of Amsterdam, Amsterdam, Netherlands
- 1654 Quality criteria for DTI Data by Assessing Color-Encoded Fractional Anisotropy Images**
Xiaofu He¹, Feng Liu¹, Lawrence Amsel¹, Lupo Geronazzo¹, Zhishun Wang¹, George Musa¹, Cristiane Duarte¹, Alayar Kangarlu¹, Andrew Gerber¹, Yunsuo Duan¹, Jianping Qiao¹, Thao Doan¹, Joy Hirsch², Christina Hoven¹
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²Yale University, New Haven, CT, United States
- 1655 Recovering Meaningful Fractional Anisotropy in Regions of Crossing Fibers for Undersampled Data**
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- 1656 Continuous Connectomics: An Exploratory Framework for Connectivity Analysis in Brain Imaging**
Boris Gutman¹, Neda Jahanshad², Derrek Hibar³, Cassandra Leonardo⁴, Kristian Eschenburg⁵, Talia Nir⁶, Julio Villalon-Reina⁷, Paul Thompson⁸
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EEG/MEG MODELING AND ANALYSIS

- 1657 Individual FEM Pipeline for EEG Source Analysis Requiring Minimal User Intervention**
Benjamin Lanfer¹, Isabella Paul-Jordanov¹, Carsten Wolters²
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²Institute for Biomagnetism and Biosignalanalysis, University of Münster, Münster, Germany
- 1658 Modelling of cortical "off periods" and theta power build-up throughout periods of wakefulness**
Fabian Le Bourdieu¹, Pierre Maquet¹
¹Cyclotron Research Centre, Liege, Belgium
- 1659 Graph theoretical analysis indicates cognitive impairment in MS stems from neural disconnection**
Jeroen Van Schependom¹, Jeroen Gielen², Jorne Laton², Marie Bie D'hooghe², Jacques De Keyser², Guy Nagels²
¹Vrije Universiteit Brussel, Brussels, Belgium,
²Vrije Universiteit Brussel, Brussel, Belgium
- 1660 Quantification of spatial accuracy in MEG/EEG source localization in deep brain structures**
Wei-Tang Chang¹, Seppo Ahlfors¹, Fa-Hsuan Lin², John Belliveau³, Jyrki Ahveninen⁴
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- 1661 MNE for MEG and EEG data processing: What's up?**
Alexandre Gramfort¹, Martin Luessi², Eric Larson³, Denis A. Engemann⁴, Daniel Strohmeier⁵, Christian Brodbeck⁶, Roman Goj⁷, Mainak Jas⁸, Teon Brooks⁹, Lauri Parkkonen⁸, Matti Hamalainen¹⁰
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- 1662 Temporal dynamics of EEG microstate sequences during pharmacologically induced loss of consciousness**
Juliane Britz¹, Julien Maillard², Miralena Tomescu¹, Dimitri Van De Ville^{3,4}, Christopher Lysakowski², Martin Tramèr², Christoph Michel¹
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- 1663 Finding brain oscillations with power dependencies in neuroimaging data**
Sven Dähne¹, Vadim Nikulin², David Ramírez³, Peter Schreier³, Klaus-Robert Müller¹, Stefan Haufe⁴
¹Technische Universität Berlin, Berlin, Germany, ²Charité, Berlin, Germany, ³Universität Paderborn, Paderborn, Germany, ⁴City College of New York, New York, United States
- 1664 In search of biomarkers for schizophrenia using electroencephalography**
Jorne Laton¹, Jeroen Van Schependom¹, Jeroen Gielen¹, Jeroen Decoster², Tim Moons², Jacques De Keyser¹, Marc De Hert², Guy Nagels^{1,2}
¹Vrije Universiteit Brussel, Brussel, Belgium, ²Universitair Psychiatrisch Centrum Kortenbergh, Kortenbergh, Belgium
- 1665 Evaluating non data-driven EEG/MEG source reconstruction methods with the Earth Mover's Distance**
Arne Ewald¹, Guido Nolte¹
¹Dept. of Neurophysiology and Pathophysiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
- 1666 A general covariance framework for EEG/MEG data with different applications**
Fetsje Bijma¹, Beata Ros¹, Mathisca de Gunst¹, Jan De Munck²
¹VU University Amsterdam, Amsterdam, Netherlands, ²VU University Medical Center, Amsterdam, Netherlands
- 1667 Characterisation of the synaptic mechanisms underlying the seizure onset using DCM**
Margarita Papadopoulou¹, Karl Friston², Marco Leite³, Pieter van Mierlo¹, Kristl Vonck⁴, Daniele Marinazzo⁵
¹Ghent University, Ghent, Belgium, ²WELLCOME TRUST CENTRE FOR NEUROIMAGING, UCL, London, United Kingdom, ³Institute of Neurology, Department of Clinical and Experimental Epilepsy, UCL, London, United Kingdom, ⁴Ghent University Hospital, Ghent, Belgium, ⁵University of Ghent, Ghent, Belgium
- 1668 Dynamic directed connectivity of visual evoked potentials in the source space**
Plomp Gijs¹, Alexis Hervais-Adelman², Laura Astolfi³, Christoph Michel¹
¹University of Geneva, Geneva, Switzerland, ²University Of Geneva, Geneva, Switzerland, ³University of Rome, Rome, Italy
- 1669 Influence of the head model on EEG and MEG source connectivity analysis**
Jae-Hyun Cho¹, Johannes Vorwerk², Carsten Wolters², Thomas Knösche¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Institute for Biomagnetism and Biosignalanalysis, University of Münster, Münster, Germany
- 1670 Assessment of nonlinear interactions in ERPs elicited by stimuli presented at short ISIs**
Charalambos Loizides¹, Achilleas Achilleos¹, Georgios Mitsis¹, Giandominico Iannetti²
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- 1671 Nonparametric Statistical Analysis for EEG Source Localization**
Jasmine Song¹, Phan Luu¹, Don Tucker¹
¹Electrical Geodesics, Inc., Eugene, OR, United States
- 1672 Recurrence analysis of SEEG recordings of cognitive responses**
Jan Fousek¹
¹Faculty of Informatics Masaryk University, Brno, Czech Republic

- 1673** **Young adults with Alzheimer's disease risk gene CLU-C have lower default mode network synchronicity, (Genetics/Genetic Association Studies)**
Meredith Braskie¹, Emily Dennis¹, Kristian Eschenburg¹, Derrek Hibar¹, Neda Jahanshad¹, Arthur Toga², Lachlan Strike³, Grant Montgomery⁴, Katie McMahon⁵, Greig de Zubicaray⁶, Nicholas Martin³, Margaret Wright³, Paul Thompson⁷
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- 1674** **Post-hoc Bayesian model reduction: a validation for electrophysiological Dynamic Causal Models**
Ashwini Oswal¹, Vladimir Litvak¹, Karl Friston¹
¹Wellcome Trust Centre for Neuroimaging, UCL Institute of Neurology, London, United Kingdom
- 1675** **A pipeline for MEG connectivity analysis and example application to ageing**
Nitin Williams¹, Jason Taylor¹, Cam-CAN¹, Richard Henson¹
¹MRC Cognition & Brain Sciences Unit, Cambridge, United Kingdom
- 1676** **Influence of Realistic Head Modeling on the EEG Forward Solution**
Johannes Vorwerk¹, Jae-Hyun Cho², Robert Oostenveld³, Stefan Rampp⁴, Hajo Hamer⁴, Thomas Knösche², Carsten Wolters¹
¹Institute for Biomagnetism and Biosignalanalysis, University of Münster, Münster, Germany, ²Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ³Donders Institute, Nijmegen, Netherlands, ⁴Department of Neurology, Epilepsy Center, University Medical Center, Erlangen, Germany
- 1677** **Differences between MEG and high-density EEG source localizations using a distributed source model**
Silke Klamer¹, Adham Elshahabi¹, Janet Giehl², Christoph Braun³, Holger Lerche¹, Niels Focke¹
¹Department of Neurology, University Hospital Tübingen, Tübingen, Germany, ²University of Tübingen, Tübingen, Germany, ³MEG Center, University of Tübingen, Tübingen, Germany
- 1678** **Non-Parametric Statistical Analysis of Voltage Topographies and Source Images on the Epoch Level**
Michael Wagner¹, Manfred Fuchs¹, Jörn Kastner¹, Reyko Tech¹
¹Compumedics Germany GmbH, Hamburg, Germany
- 1679** **EEG single trial variability, reaction time variability and attention deficit hyperactivity disorder**
Stephan Bender¹, Franz Resch², Tobias Banaschewski³, Daniel Brandeis³, Manfred Laucht³
¹Department of Child and Adolescent Psychiatry and Psychotherapy, Goethe University Frankfurt, Frankfurt, Germany, ²University of Heidelberg, Heidelberg, Germany, ³Central Institute of Mental Health, Mannheim, Germany
- 1680** **Effects of light sevoflurane anesthesia on cortico-cortical interaction in EEG**
Philipp Kohl¹, Joachim Pientka², Andreas Ranft², Tobias Kiel², Christine Preibisch³, Eberhard Kochs², Bernhard Hemmer¹, Claus Zimmer³, Rüdiger Ilg¹, Denis Jordan²
¹Department of Neurology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, ²Department of Anaesthesiology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany, ³Department of Neuroradiology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany
- 1681** **Automated model selection for covariance estimation and spatial whitening of M/EEG signals**
Denis A. Engemann¹, Alexandre Gramfort²
¹Institute of Neuroscience and Medicine, Cognitive Neuroscience (INM-3), Jülich Research Centre, Jülich, Germany, ²Telecom ParisTech — CEA Neurospin, Paris, France
- 1682** **Antisymmetric cross-bispectra for mapping true cross-frequency interactions in EEG/MEG**
Federico Chella^{1,2}, Laura Marzetti^{1,2}, Vittorio Pizzella^{1,2}, Filippo Zappasodi^{1,2}, Guido Nolte³
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- 1683** **Differences in acoustic perception between musician and non musicians explored by ERP analysis**
Jan Blumhardt¹, Mariacristina Musso², Bernd Feige³
¹University Freiburg, Freiburg, Germany, ²Neurology, N/A, ³University Hospital Freiburg, Freiburg, Germany

- 1684 Properties of Mass-Spiking Activity in Humans Measured with Non-Invasive EEG**
Zahra Owji¹, Yves Bérubé-Lauzière¹, Kevin Whittingstall¹
¹Université de Sherbrooke, Sherbrooke, Canada
- 1685 How does the choice of your MEG inverse method impact source-level connectivity detection?**
Ana Sofia Hincapie¹, Jan Kujala², Domingo Mery³, Diego Cosmelli³, Karim Jerbi⁴
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- 1686 Characterization of Microstates of Human Electroencephalography in Awake and NREM Sleep**
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¹Department of Radiology Washington University, Saint Louis, United States, ²Department of Neurology, Washington University, Saint Louis, United States
- 1687 Spatiotemporal Organization of Neuronal Avalanches: A New Perspective on Human Connectome**
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¹University of Helsinki, Helsinki, Finland, ²University of Genoa, Genoa, Italy
- 1688 Mobile Brain/Body Imaging of active interception of moving objects**
Evelyn Jungnickel¹, Taher-Jan Jalali¹, Klaus Gramann¹
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- 1689 FindSource3D — Source Localization Using Rational Approximation on Plane Sections**
Todor Jordanov¹, Jean-Paul Marmorat², Maureen Clerc³, Juliette Leblond³, Andre Waelkens¹, Theodore PAPADOPOULOS³
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- 1690 Laminar distribution of cross-frequency couplings of spontaneous current sources and sinks**
Roberto Sotero¹, Aleksandra Bortel², Shmuel Naaman³, Victor Mocanu⁴, Shahab Bakhtiari³, Pascal Kropf³, Martin Villeneuve¹, Amir Shmuel¹
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- 1691 Validation of the Threshold Free Cluster Enhancement method for EEG statistical maps**
Cyril Pernet¹, Thomas Nichols², Guillaume Rousselet³
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- 1692 Robust Ensemble Averaging for EEG Signals using a Novel Dynamic Time Warping Approach**
Biel Roig Solvas¹, Burak Erem², Damon Hyde², Simon Warfield², Jurriaan Peters³, Dana Brooks¹
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- 1693 Brain network dynamics during epileptic seizures: graph motifs and synchronization measures**
Abner Rodrigues¹, Birajara Machado², Gerson Florence¹, Ana Hamad³, André Fujita⁴, Luiz Baccala¹, Koichi Sameshima¹
¹University of São Paulo, São Paulo, Brazil, ²Hospital Israelita Albert Einstein, São Paulo, Brazil, ³University of São Paulo, Ribeirão Preto, Brazil, ⁴University of São Paulo, São Paulo, SC
- 1694 Localization of epileptiform electrical activity recorded from severe TBI patients using scalp EEG**
Matt Goh¹, Andrei Irimia¹, Carinna Torgerson¹, John Van Horn¹, Ron Kikinis², Paul Vespa³
¹University of Southern California, Los Angeles, United States, ²Harvard Medical School, Boston, United States, ³University of California, Los Angeles, Los Angeles, United States
- 1695 "BLIND" AUTOMATED INTRACRANIAL SEIZURE ONSET ANALYSIS BRINGS UNEXPECTED RESULTS**
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- 1696 Regularized Partial Lagged Coherence for Functional Connectivity Analysis in Presence of Cross-talk**
Sergul Aydore¹, Syed Ashrafulla¹, Richard Leahy¹
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EXPLORATORY MODELING AND ARTIFACT REMOVAL

- 1697 Integrating MEG and fMRI Data for Optimized Region-Dependent Sensitivity**
Sean McWhinney¹, Timothy Bardouille², Ryan D'Arcy³, Aaron Newman¹
¹Dalhousie University, Halifax, Canada, ²IWK Health Centre, Halifax, Canada, ³Simon Fraser University and Surrey Memorial Hospital, Surrey, Canada
- 1698 4D magnetic susceptibility tomography reveals bidirectional neurovascular responses**
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¹The Mind Research Network and LBERI, Albuquerque, United States, ²The Mind Research Network and UNM, Albuquerque, United States
- 1699 A more effective cluster-based fMRI data analysis strategy for unsmoothed data**
Huanjie Li^{1,2}, Lisa Nickerson³, Jinhu Xiong⁴, Jia-Hong Gao^{1,2}
¹Beijing City Key Lab for Medical Physics and Engineering, School of Physics, Peking University, Beijing, China, ²Center for MRI Research, Academy for Advanced Interdisciplinary Studies, Peking University, Beijing, China, ³McLean Hospital Harvard Medical School, Belmont, MA, USA, ⁴Department of Radiology, University of Iowa, Iowa City, IA, USA
- 1700 Restricted Boltzmann Machines for Neuroimaging: an Application in Identifying Intrinsic Networks**
R Devon Hjelm^{1,2}, Ruslan Salakhutdinov³, Vince Calhoun⁴, Elena Allen⁵, Tulay Adali⁶, Sergey Plis⁷
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- 1701 Image Artifact Correction Tools for Brain DTI Data: Effects on Test-Retest Reproducibility**
Barbara Kreilkamp^{1,2}, Nico Dario Papinutto^{1,3}, Jorge Jovicich¹
¹CIMeC Center for Mind/Brain Science, University of Trento, Trento, Italy, ²Universität Osnabrück, Osnabrück, Germany, ³Department of Neurology, University of California San Francisco, San Francisco, CA
- 1702 From the visual field to the BOLD response — a toolbox to predict and test fMRI experiments**
Kevin Aquino¹, Peter Robinson¹, Thomas Lacy¹, Mark Schira²
¹University of Sydney, Sydney, Australia, ²University of Wollongong, Wollongong, Australia
- 1703 Influence of Data Processing Strategies on Simultaneous EEG-fMRI Results in Patients with Epilepsy**
Michal Miki¹, Radek Marecek², Eva Janousova³, Tomas Slavicek⁴, Marek Barton⁵, Milan Brazdil⁶
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- 1704 Difference Model Subtraction: a new method for removing residual gradient artefacts in EEG-fMRI**
Glyn Spencer¹, Karen Julia Mullinger^{1,2}, Richard Bowtell¹
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- 1705 Electro-metabolic coupling investigated with jitter invariant dictionary learning**
Sebastian Hitziger¹, Maureen Clerc², Alexandre Gramfort³, Sandrine Saitet⁴, Christian Bénar⁵, Theodore PAPADOPOULOS⁶
¹INRIA, Sophia Antipolis, FM, ²Inria, Sophia Antipolis, France, ³Telecom ParisTech — CEA Neurospin, Paris, France, ⁴Institut de Neurosciences des Systèmes, Marseille, France, ⁵INSERM U1106, Marseille, France, ⁶INRIA, Sophia Antipolis, France
- 1706 Importance of physiological noise regression for low TR (multiband) resting-state fMRI**
Norman Scheel¹, Catie Chang², Amir Madany Mamlouk¹
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- 1707 Comparison of EPI distortion correction methods at 3T and 7T**
Levin Fritz¹, Joost Mulders¹, Hester Breman², Judith Peters³, Matteo Bastiani³, Alard Roebroeck³, Jesper Andersson⁴, John Ashburner⁵, Nikolaus Weiskopf⁶, Rainer Goebel³
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1708 Exploratory Analysis of Imaging and Behavioral Phenotypes with Sparse CCA

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1709 Study the impacts of physiological processes on BOLD signals using ultrafast fMRI

Yunjie Tong¹, Blaise Frederick²

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1710 Evaluation of fMRI Group Analysis Methods without Ground Truth: Impact of Subject Age

Babak Afshin-Pour¹, Nathan Churchill¹, Cheryl Grady¹, Stephen Strother¹

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1711 Partial volume effect has an impact on individual differences of ALFF from resting-state fMRI

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Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal University, Beijing, China

1712 Put a SOCK on it: Denoising fMRI of language using an automated ICA artifact identification method

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1713 An algorithm for intracranial electrode localization using nonlinear finite element analysis

Michael Iorga¹, Josef Parvizi²

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FMRI CONNEVTIVITY AND NETWORK MODELING**1714 Uncovering a visuospatial network at rest**

Maxime Chamberland¹, Michaël Bernier¹, David Fortin¹, Maxime Descoteaux¹, Kevin Whittingstall¹

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1715 Whole Brain Dynamic Network Analysis in Real-time During Video Viewing

Jingyun Chen¹, Jinhui Qin¹, Rhodri Cusack¹, Mark Daley¹

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1716 Assessing dynamical correlations between functional and structural brain connectivity

Raphaël Liégeois¹, Pierre Geurts¹, Erik Ziegler², Francisco Gómez³, Andrea Soddu⁴, Audrey Vanhaudenhuyse², Steven Laureys², Rodolphe Sepulchre⁵

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Science Department, Universidad Central de Colombia, Bogota, Colombia, ⁴Brain and Mind,

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1717 Time-resolved functional connectomics: Dynamics of human brain connectivity at rest

Andrew Zalesky¹, Alex Fornito², Luca Cocchi³, Leonardo L. Gollo⁴, Michael Breakspear⁵

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1718 Methods for network modelling from high quality rfMRI data

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Oxford University, Oxford, UK, ⁴NL Donders Institute for Brain, Cognition and Behavior Radboud University

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- 1719 Heritability of functional networks from HCP fMRI data**
Stephen Smith¹, Matthew Glasser², Karla Miller¹, Emma Robinson¹, Mark Jenkinson¹, Christian Beckmann³, Xu Chen⁴, Kamil Ugurbil⁵, Thomas Nichols⁴, David Van Essen²
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- 1720 The influence of different ROI selection methods on amygdala functional connectivity analysis**
Peiyu Huang¹, Minming Zhang¹, Xinfeng Yu¹
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- 1721 Age-related dynamic functional connectivity states during sleep**
Philip Dickinson^{1,2,3}, Javier Gonzalez-Castillo⁴, Catie Chang⁵, Pierre Orban³, Nicolas Martin^{6,3,7}, Véronique Daneault^{3,7}, Christian L. Dansereau³, Julien Doyon^{3,6}, Peter Bandettini⁴, Julie Carrier^{3,6,7}, Pierre Bellec^{3,8}
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- 1722 Interrelating functional and effective connectivity from structural connectivity of the human brain**
Grishma Mehta Pandejee^{1,2}, James Henderson^{3,1,2}, Somwrita Sarkar⁴, Peter Robinson^{1,2}
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- 1723 Connectivity networks revealed by independent modelling of BOLD primary and post-stimulus components**
Karen Julia Mullinger^{1,2}, Stephen Mayhew², Andrew Bagshaw², Richard Bowtell¹, Susan Francis¹
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- 1724 GraphVar: A user-friendly toolbox for comprehensive graph analyses of functional brain connectivity**
Johann Kruschwitz^{1,2}, David List^{1,2}, Mikail Rubinov³, Henrik Walter¹
¹Charité Universitätsmedizin, Berlin, Germany, ²Technische Universität Dresden, Dresden, Germany, ³University of Cambridge, Cambridge, United Kingdom
- 1725 The effects of ketamine on functional connectivity network interactions**
Richard Joules¹, Sara De Simoni¹, Orla Doyle¹, Owen O'Daly², Andre Marquand³, Mitul Mehta⁴
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- 1726 Quantifying Temporal States in rs-fMRI Data using Bayesian Non-parametrics**
Josefine Korzen¹, Kristoffer Hougaard Madsen², Morten Mørup¹
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- 1727 Influence of levodopa on brain network: graph theory study based on expert knowledge and AAL atlas**
Eva Bujnoskova¹, Jan Fousek¹, Nela Elfmalkova², Martin Gajdoš³, Martina Mračková², Irena Rektorova²
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- 1728 Modulation of effective connectivity in V1 and V2 by visual consciousness assessed with fMRI and DCM**
Jihye Jang¹, Marie-Luise Brandt^{1,2}, Christian Sorg¹, Valentin Riedl¹, Anselm Doll^{1,2}, Afra Wohlschlaeger¹
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- 1729** **Developmental analysis of endogenous functional brain variability and connectivity**
Prantik Kundu¹, Brenda Benson², Wen-Ming Luh³, Dana Rosen², Peter Bandettini¹, Daniel Pine², Monique Ernst²
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- 1730** **SPARK: Sparsity-based Analysis for Reliable k-hubness in Brain Functional Connectivity**
Kangjoo Lee^{1,2}, Jean-Marc Lina^{1,3,4}, Jean Gotman², Christophe Grova^{1,2}
¹Multimodal Functional Imaging Lab, Biomedical Engineering Dpt, McGill University, Montreal, Canada, ²Montreal Neurological Institute, McGill University, Montreal, Canada, ³Mathematics Research Centre, University of Montreal, Montreal, Canada, ⁴École de Technologie Supérieure, Montreal, Canada
- 1731** **Towards whole brain task-dependent connectivity estimation using voxel-wise PPI analysis**
Andreas Horn^{1,2}, Felix Blankenburg³
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- 1732** **Brain networks based on regional fMRI correlations during PSAT in MS patients and normal controls**
Jeroen Gielen¹, Jeroen Van Schependom¹, Jorne Laton¹, Wim Van Hecke², Paul Parizel³, Jacques De Keyser¹, Guy Nagels¹
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- 1733** **Posterior cingulate cortex co-activation patterns: a study in propofol-induced loss of consciousness**
Enrico Amico^{1,2}, Francisco Gómez³, Daniele Marinazzo², Steven Laureys⁴
¹University of Liège, Liège, Belgium, ²University of Ghent, Ghent, Belgium, ³University of Liege, Liege, Belgium, ⁴Université de Liège, Liège, Belgium
- 1734** **Thalamo-Hippocampal Functional Connectivity Predicts Seizure Laterality in Individual TLE Patients**
Daniel Barron¹, Peter Fox¹, Heath Pardoe², Jack Lancaster¹, Larry Price³, Karen Blackmon², Kristen Berry², Ruben Kuzniecky², Orrin Devinsky², Thomas Thesen²
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- 1735** **The effectiveness of PESTICA for physiologic noise correction in functional connectivity at 7 Tesla**
Erik Beall¹, Mark Lowe¹
¹Cleveland Clinic, Cleveland, United States
- 1736** **Low-frequency fluctuation characteristics of the DMN components in aging and ischemic stroke**
Christian La¹, Pouria Mossahebi¹, Veena Nair¹, Justin Sattin¹, Marcus Chacon¹, Matthew Jensen¹, Mary Meyerand¹, Vivek Prabhakaran¹
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- 1737** **Estimation of common community structures in multi-subject brain networks**
Dragana Pavlovic¹, Edward Bullmore², Thomas Nichols³, Emma Towilson², Petra Vertes⁴
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- 1738** **Functional Connectivity of Pre-Stimulus BOLD fMRI Relates to Performance at Baseball Go/No-Go Task**
Jason Sherwin¹, Jordan Muraskin², Paul Sajda²
¹Columbia University, New York, United States, ²Columbia University, New York, NY
- 1739** **Uncovering stimulus-locked network dynamics during narrative comprehension**
Erez Simony¹, Chris Honey², Janice Chen¹, Uri Hasson¹
¹Department of Psychology and the Neuroscience Institute, Princeton University, Princeton, USA, ²Department of Psychology, University of Toronto, Toronto, Canada

- 1740 Test-retest reliability of functional lateralization of language network**
Yang Fan¹, Linlin Zhu², Qihong Zou³, Zhendong Niu², Jia-Hong Gao⁴
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- 1741 Beware of reliable drifts between wakefulness and sleep during typical resting state MRI experiments**
Helmut Laufs¹, Enzo Tagliazucchi²
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- 1742 Predictive Connectivity Distance of Local Functional Homogeneity across the Human Cortical Mantle**
Lili Jiang¹, Xi-Nian Zuo¹
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- 1743 From rest to task and back — functional connectivity in obsessive compulsive disorder**
Sarah Bueker^{1,2}, Andreas Kordon¹, Thilo van Eimeren³, Fritz Hohagen¹, Bartosz Zurowski^{1,3}
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- 1744 Nodal approach reveals differential impact of lateralized focal epilepsies on hub reorganization**
Ben Ridley¹, Celia Rousseau², Jonathan Wirsich², Constanza Dalvit^{2,3}, Arnaud Le Troter², Elisabeth Soulier², Sylvianne Confort-Gouny², Fabrice Bartolomei^{4,3}, Jean-Philippe Ranjeva², Sophie Achard⁵, Maxime Guye^{2,6}
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- 1745 Comparison of Structural Covariance with Functional Connectivity in the left Anterior Insula**
Mareike Closs¹, Claudia Rottschy², Angela Laird³, Peter Fox⁴, Simon Eickhoff⁵
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- 1746 Methodological framework to study synchrony and effective connectivity with ICA**
Maria de la Iglesia Vayá^{1,2,3,4}, Jose Molina-Mateo⁵, Maria José Escartí⁶, Luis Martí-Bonmati², Marien Gadea⁷, Gemma Monté^{8,9}, Francisco Xavier Castellanos¹⁰, Erika Proal^{11,12,13}, Gonzalo Rojas Costa¹⁴, Bharat Biswal¹⁵, Julio Sanjuan¹⁶
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- 1747 Investigating individual differences in resting state thalamocortical functional connectivity**
Joanne Hale¹, Stephen Mayhew¹, Karen Julia Mullinger², Theodoros Arvanitis³, Susan Francis², Andrew Bagshaw¹
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- 1748 Detection of Task-Related Connectivity Changes through Dynamic Connectivity Regression (DCR)**
Wei Gao¹, Amanda Elton²
¹University of North Carolina at Chapel Hill, N/A,
²University of North Carolina at Chapel Hill, Chapel Hill, United States
- 1749 Assessing parameter identifiability to optimise experimental designs for Dynamic Causal Modelling**
Elisa Scheller¹, Carolin Arand², Björn Schelter³, Stefan Kloeppel¹
¹University Medical Center Freiburg, Freiburg, Germany, ²University of Freiburg, Center for Data Analysis and Modelling, Freiburg, Germany, ³University of Aberdeen, Aberdeen, Scotland
- 1750 Dynamic functional connectivity: Better characterized by separated states or a mixture of patterns?**
Nora Leonardi^{1,2}, William Shirer³, Michael Greicius³, Dimitri Van De Ville^{1,2}
¹Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, ²University of Geneva, Geneva, Switzerland, ³Stanford University, Stanford, United States
- 1751 Combined Voxel- and Region- based Network Analysis of the Associative-semantic System**
Yu Wang¹, Katarzyna Adamczuk¹, An-Sofie De Weer¹, stefan sunaert^{2,3,4}, Rik Vandenberghe^{1,4,5}, Patrick Dupont^{1,3,4}
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- 1752 Influence of underlying network structure on accuracy of DCM estimation**
Martin Gajdoš¹, Michal Mikl¹, Martin Havlicek², Jan Fousek³
¹CEITEC, Masaryk University, Brno, Czech Republic, ²Maastricht University, Maastricht, Netherlands, ³Faculty of Informatics Masaryk University, Brno, Czech Republic
- 1753 The brain in motion: going beyond static functional connectivity estimates**
Enzo Tagliazucchi¹, Helmut Laufs²
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- 1754 Heritability of Intrinsic Connectivity Network Profiles in the Human Brain**
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- 1755 Chemotherapy and Lung Cancer: Resting State Networks using Independent Component Analysis on fMRI**
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- 1756 Homotopic functional connections are most stable and are supported by direct anatomical projections**
Kelly Shen¹, Bratislav Misic², Mary Askren³, Gleb Bezgin¹, Martin Buschkuhl⁴, Bernadine Cimprich⁵, Patricia Deldin⁵, R. Matthew Hutchison⁶, Susanne Jaeggi⁴, Mi Jung⁵, Ethan Kross⁵, Scott Peltier⁶, Patricia Reuter-Lorenz⁵, Ravi Menon⁷, Stefan Everling⁷, John Jonides⁵, Anthony McIntosh¹, Marc Berman⁸
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- 1757 Improving interpretability of graphical models in fMRI analysis via variable-selection**
Jean Honorio¹, Dimitris Samaras², Irina Rish³, Guillermo Cecchi⁴
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- 1758 Task influence on the functional connectivity-based parcellation analysis**
Xiangyu Long¹, Dominique Goltz^{1,2}, Daniel Margulies^{3,4}, Till Nierhaus^{1,4}, Arno Villringer^{1,4}
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- 1759 The influence of end-tidal CO₂ on cerebrovascular reactivity and functional connectivity**
Jonathan Kwint¹, Jean Chen²
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- 1760 Tracking changes in brain graph metrics: application to healthy controls and schizophrenia patients**
Qingbao Yu¹, Jing Sui¹, R Devon Hjelm¹, Yuhui Du^{1,2}, Hao He^{1,3}, Godfrey Pearson^{4,5}, Vince Calhoun^{1,3}
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- 1761 Voxel Level Dynamic Global Functional Connectivity Exhibits Interhemispheric Symmetry**
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- 1762 Extract Common Community Structures from Multiple Brain Connectomes**
Yu-Teng Chang¹, Dimitrios Pantazis¹
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- 1763 Fixing flaws in Functional Correlation: a new network identification method**
Ben Cassidy¹, Victor Solo²
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- 1764 Disrupted brain functional networks in patients with disorders of consciousness**
Liqing Liu¹, Qiyou Xie², Junjing Wang¹, Shufang Chu², Qin Xu¹, Feng Zhou², Qing Ma¹, Changhong Li¹, Ronghao Yu², Ruiwang Huang¹
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- 1765 Electrical Circuit Model for Quantifying Abnormal White Matter Connectivity in Maltreated Children**
Moo Chung¹, Jamie Hanson¹, Nagesh Adluru¹, Andrew Alexander¹, Richard Davidson¹, Seth Pollak¹
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- 1766 Module-specific disruption in patients with early-to-mid Parkinson's disease**
Qing Ma¹, Biao Huang², Changhong Li¹, Liqing Liu¹, Qin Xu¹, Ruiwang Huang¹
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- 1767 Estimating Dynamic Functional Connectivity in rest fMRI Based on Machine Learning Algorithms**
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- 1768 Studying the Effective Brain Connectivity using the Multiregression Dynamic Models**
Lilia Carolina Carneiro da Costa¹, Jim Smith¹, Thomas Nichols²
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- 1769 Community structure in resting state complex networks**
Kasper Winther Andersen^{1,2}, Kristoffer Madsen¹, Hartwig Siebner¹, Mikkel Schmidt², Morten Mørup², Lars Kai Hansen²
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- 1770 Interhemispheric Recruitment in the Face Perception Network Revealed by Dynamic Causal Modeling**
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- 1771 Graph Theoretical Analysis of Structural Brain Networks in Medication-Naïve ADHD Patients**
Taekeun Yoon¹, Jae Hyun Yoo¹, Sang Won Lee¹, Jeewook Choi², bum seok Jeong¹
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- 1772 Is homotopic intramural connectivity related to cytoarchitectonic cortical classification?**
Maïte Termenon^{1,2}, Assia JAILLARD HOMMEL^{3,4}, Sophie Achard⁵, Felix Renard^{3,4}, Chantal Delon-Martin^{1,2}
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- 1773 Significant feed-forward connectivity revealed by high frequency BOLD fMRI signals**
Ying-Hua Chu¹, Yi-Cheng Hsu², Kevin Tsai², Shang-Yueh Tsai³, Wen-Jui Kuo⁴, Fa-Hsuan Lin²
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- 1774 Individual economical characteristics and diversity of functional brain networks**
Andreas Hahn¹, Georg Kranz¹, Ronald Sladky², Sebastian Ganger¹, Christian Windischberger², Siegfried Kasper¹, Rupert Lanzenberger¹
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- 1775 The case for personal connectomics: Alzheimer's disease classification using subject specific ROIs**
William Sohn¹, Young-Beom Lee¹, Kwangsun Yoo¹, Duk L. Na², Yong Jeong¹
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- 1776 Dynamic Causal Modelling of brain-behaviour relationships**
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- 1777 Resting-state functional networks in gender dysphoria and differences to men and women**
Jessica Junger¹, Katharina Pauly¹, Benjamin Clemens¹, Joseph Neulen¹, Christiane Neuschaefer-Rube¹, Dirk Frölich¹, Gianluca Mingoia², Birgit Derntl¹, Ute Habel¹
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- 1778 Slow waves in rest and paced motion studied with Wavelet Transform Coherence: an fMRI study**
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- 1779 Voxelwise eigenvector centrality analyses in fMRI: do the number and sizes of nodes matter?**
Alle Meije Wink¹, Jan de Munck¹, Betty Tijms¹, Frederik Barkhof¹
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- 1780 Effects of the ApoE4 genotype on intrinsic functional connectivity in healthy elderly individuals**
Marius Butz¹, Vincent van de Ven², Fabian Fußer³, Tarik Karakaya³, Marius Butz³, Daniel Hartmann³, Beate Sepanski³, Viola Oertel-Knöchel³, David Prvulovic³, Johannes Pantel⁴
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- 1781 Educational effects on functional efficiency of brain networks in normal aging**
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- 1783 Quasi-stable state segmentation of resting-state brains based on dynamic connectivity subnetworks**
Hui Shen^{1,2}, Bing Ji², Ling-Li Zeng¹, Zhenfeng Li¹, Dewen Hu¹, Xiaoping Hu²
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- 1784 Effects of imprecise signal extraction on posterior DCM parameters**
Tomáš Slaviček¹, Martin Lamoš¹, Martin Gajdoš², Michal Mikl², Jiří Jan¹
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- 1785 Effects of cerebellar lesions on functional connectivity of attention networks**
Jacqueline Krajník^{1,2}, Veronika Schöpf¹, Kathrin Kollindorfer¹, Florian Fischmeister³, Daniela Prayer¹, Gregor Kasprian¹, Thomas Czech², Thomas Pletschko⁴, Ulrike Leiss⁴, Monika Chocholous⁴, Christian Dorfer²
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- 1786 Estimating joint dynamic functional connectivity for resting-state fMRI time series data**
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- 1787 Interaction between schizotypy and DRD2 on functional brain connectivity during attentional control**
Paolo Taurisano¹, Rosa Vitale¹, Linda Antonucci², Leonardo Fazio³, Tiziana Quarto², Raffaella Romano², Barbara Gelao¹, Annabella Di Giorgio¹, Grazia Caforio¹, Antonio Rampino⁴, Giuseppe Blasi¹, Alessandro Bertolino⁵
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- 1788 Effects of light sevoflurane anesthesia on functional connectivity in fMRI**
Guido Rohrer¹, Andreas Ranft², Tobias Kiel², Joachim Pientka², Valentin Riedl³, Christine Preibisch³, Eberhard Kochs², Bernhard Hemmer¹, Claus Zimmer³, Denis Jordan², Rüdiger Ilg¹
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- 1789 Overlap between Functional Brain Modules Predicts Dual Task Performance: A Complex Network Analysis**
Mohsen Alavash¹, Claus Hilgetag^{2,3}, Christiane Thiel¹, Carsten Giessing¹
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- 1790 Prediction of Individual Intelligence using fMRI**
Liyun Wang¹, Shan Yu¹, Ming Song¹
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- 1791 Frequency-Dependent Resting-State Connectivity and Network Disintegration in Brain Hub Regions**
Hsu-Lei Lee¹, Jakob Assländer¹, Pierre LeVan¹, Jürgen Hennig¹
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- 1792 A comparison of community detection methods**
Teague Henry¹, Stephanie Lane¹, Damien Fair², Kathleen Gates³
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- 1793 Language in the human brain: Beyond the specialization of the left hemisphere for language**
Angela Martina Mueller¹, Martin Meyer¹
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- 1794 Temporal clustering analysis to evaluate slow oscillations around 0.1 Hz**
Vânia Tavares¹, Joana Brito¹, Hugo Ferreira¹, Alexandre Andrade¹, Karl Koschutnig², Gert Pfurtscheller³
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- 1795 Detecting Cognitive States with Graph Theory Network Metrics**
Laura Buchanan¹, Javier Gonzalez-Castillo¹, Colin Hoy¹, Daniel Handwerker¹, Peter Bandettini¹
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- 1796 Sigmoid function parameter stability in anatomically informed priors for dynamic causal models**
René Labounek¹, Martin Gajdoš², Jan Fousek^{3,1}, Michal Mikl², Martin Havlicek^{4,1}, Milan Brázdil², Jiří Jan¹
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- 1797 Retinotopically-organized resting-state functional connectivity goes beyond cortical distance effect**
Debra Dawson^{1,2}, Kuwook Cha¹, Lindsay B. Lewis¹, Felix Carbonell^{1,2}, Janine Mendola¹, Amir Shmuel^{2,1}
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- 1798 Test-retest reliability of brain activation and task-dependent connectivity in a Theory of Mind task**
Martin Fungisai Gerchen^{1,2}, Daniela Mier¹, Leila Haddad³, Heike Tost³, Knut Schnell⁴, Henrik Walter⁵, Andreas Meyer-Lindenberg³, Peter Kirsch^{1,2}
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- 1799 ConGrads! A framework for mapping connectivity gradients with resting-state fMRI**
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- 1800 Classifying Cognitive States Using fMRI Network Relationships Across the Entire Brain**
Colin Hoy¹, Javier Gonzalez-Castillo¹, Daniel Handwerker¹, Laura Buchanan¹, Meghan Robinson¹, Peter Bandettini¹
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- 1801 Differential functional connectivity of regions associated with saccade and antisaccade performance**
Isabelle Seidler¹, Simon Eickhoff², Peter Fox³, Angie Laird⁴, Edna-Clarisse Cieslik⁵
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- 1802 Cross-modal comparison of seed-based structural and functional covariance**
Andrew Reid¹, Gaolang Gong², Angela Laird³, Peter Fox⁴, Alan Evans⁵, Katrin Amunts⁶, Simon Eickhoff⁷
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- 1803 Dealing with Equivalent Solutions in Effective Connectivity Analysis**
Adriene Beltz¹, Peter Molenaar¹
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- 1804 Sex Differences in Functional Connectivity of the Executive Control Network**
Emily Dennis¹, Meredith Braskie¹, Kristian Eschenburg¹, Arthur Toga¹, Lachlan Strike², Katie McMahon³, Greig de Zubicaray⁴, Nicholas Martin², Margie Wright^{5,4}, Paul Thompson¹
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- 1805 Tracking instantaneous connectivity changes related to single-trial activation using ultra-fast fMRI**
Burak Akin¹, Hsu-Lei Lee¹, Jürgen Hennig¹, Pierre LeVan¹
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- 1806 Comparison of ICA based fMRI artifact removal: single subject and group approaches**
Yuhui Du^{1,2}, Elena A. Allen^{1,3}, Hao He^{1,4}, Jing Sui¹, Vince D. Calhoun^{1,4}
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- 1807 Separating functional modes using spectral methods applied to resting-state fMRI**
Saad Jbabdi¹, Koen Haak², Timothy Behrens¹
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- 1808 Lag-based connectivity applied to fMRI: tricky but not hopeless**
João Rodrigues¹, Patrícia Figueiredo², Alexandre Andrade¹
¹IBEB/FCUL, Lisbon, Portugal, ²Institute for Systems and Robotics / Instituto Superior Técnico, University of Lisbon, Lisbon, Portugal
- 1809 MULAN: a Multiple Connectivity Analysis Method for Multidimensional Datasets**
Huifang Wang¹, Christian G Bénar¹, Pascale Quilichini², Viktor Jirsa¹, Christophe Bernard¹
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- 1810 Normal Development of Sparse Functional Connectivity Patterns During Childhood and Adolescence**
Harini Eavani¹, Raquel Gur¹, Ruben Gur¹, Christos Davatzikos¹, Theodore Satterthwaite¹
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- 1811 Quantifying heterogeneity in functional connectivity across a sports-related concussed sample**
Stephanie Lane¹, Eleanna Varangis¹, Teague Henry¹, Kelly Giovanello¹, Kevin Guskiewicz¹, Kathleen Gates¹
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- 1812 Brain networks based discriminate analysis for schizophrenia, bipolar and schizoaffective disorders**
Yuhui Du^{1,2}, Jing Sui¹, Qingbao Yu¹, Hao He^{1,3}, Godfrey Pearson⁴, Vince D. Calhoun^{1,3}
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- 1813 Temporal clustering of innovations from total activation reveals overlapping networks during rest**
Fikret Isik Karahanoglu¹, Dimitri Van De Ville¹
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- 1814 Functional network dynamics in epilepsy revealed by dynamic functional connectivity and EEG**
Maria Giulia Preti¹, Fikret Isik Karahanoglu¹, Nora Leonardi¹, Frédéric Grouiller², Mélanie Genetti³, Margitta Seeck⁴, Serge Vulliemoz⁴, Dimitri Van De Ville¹
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- 1815 Visualizing Brain Functional Connectivity Based on Anisotropic Correlations in Resting State MRI**
Zhaohua Ding¹, Ran Xu¹, Victoria Morgan¹, Adam Anderson¹, John Gore¹
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- 1816 Estrogen Levels in Women Affect Amygdala Subnuclei Resting-State Functional Connectivity MRI**
Jonas Engman¹, Clas Linnman², Koene Van Dijk^{3,4}, Mohammed Milad⁵
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- 1817 Mutual Information based Multivariate Connectivity Analysis Methods for fMRI**
Martin Luessi¹, Marta Bianciardi², Matti Hamalainen³, Victor Solo⁴
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- 1818 Modulation of brain functional connectivity during voluntary concentric and eccentric muscle contraction**
Wanxiang Yao¹, Zhiguo Jiang^{2,3}, Guang Yue^{2,4}
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- 1819 Amygdala and Default Mode Network Resting-State Functional Connectivity in Social Anxiety Disorder**
Jonas Engman¹, Andreas Frick¹, Iman Alaie¹, Johannes Björkstrand¹, Malin Gingnell¹, Thomas Ågren¹, Vanda Faria^{1,2}, Kurt Wahlstedt¹, Elna-Marie Larsson³, Arvid Morell³, Mats Fredrikson¹, Tomas Furmark¹
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- 1820 Rich, frequency dependent connectivity structure distinguishes brain states**
Roser Sala-Llanch¹, Stephen Smith², Eugene Duff²
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- 1821 Longitudinal functional connectivity changes in presymptomatic frontotemporal dementia**
Lize Jiskoot¹, Elise Dopper^{1,2,3}, Tom den Heijer^{1,4,5}, Roos de Graaf⁶, Inge de Koning⁶, Anke Hammerschlag⁷, Harro Seelaar¹, William Seeley⁸, Ilya Veer^{2,9,10}, Mark van Buchem^{11,2}, Patrizia Rizzu⁷, Serge Rombouts^{12,2,10}, John van Swieten^{1,7}
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- 1822 Predicting working memory performance from complex brain networks during task and at rest**
Emily Finn¹, Monica Rosenberg¹, Xilin Shen¹, Xenophon Papademetris¹, Marvin Chun¹, R Constable¹
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- 1823 Wavelet Graphs on Mutual Information Functional Connectivity for MS Patients in Resting State fMRI**
Ehsan Eqlimi¹, Arman Eshaghi², Nader Riyahi Alam¹, Alireza Ahmadian¹, Mohammad Ali Sahraian², Hamidreza Saligheh Rad^{1,3}
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- 1824 The Predictive Value of Functional Connectivity**
Madeleine Clute¹, Aarti Singh¹, Barnabas Poczos¹, Timothy Verstynen¹
¹Carnegie Mellon University, Pittsburgh, United States
- 1825 Changes in Whole-Brain Functional Connectivity across Task Difficulty**
Deniz Vatansever¹, David Menon¹, Anne Manktelow¹, Emmanuel Stamatakis²
¹University of Cambridge, Cambridge, United Kingdom, ²Queens' College, Cambridge, Cambridge, United Kingdom
- 1826 Differences in Modulation of Intrinsic Networks During Attentional Task in Parkinson Disease**
Tara Madhyastha¹, Mary Askren¹, Peter Boord¹, James Leverenz¹, Thomas Grabowski¹
¹University of Washington, Seattle, WA
- 1827 Non-Gaussian methods and high-pass filters in the estimation of effective connections**
Ruben Sanchez Romero¹, Clark Glymour², Joseph Ramsey²
¹Carnegie Mellon University, Pittsburgh, United States, ²Carnegie Mellon University, Pittsburgh, PA
- 1828 Modeling structural lesions in The Virtual Brain and their effect on global dynamics**
Paula Sanz-Leon¹, Viktor Jirsa²
¹Institut de Neurosciences des Systèmes, Marseille, France, ²Ctr. Natl. de la Recherche Scientifique (CNRS), Marseille, France
- 1829 Connective field mapping in a hemispherectomized patient**
Mirjan van Dijk¹, Nicolas Gravel¹, Koen Haak², Nomdo Jansonius¹, Pim van Dijk¹, Frans Cornelissen¹
¹University Medical Center Groningen, Groningen, Netherlands, ²Donders Centre for Cognitive Neuroimaging, Nijmegen, Netherlands
- 1830 Multistable Dynamics of Cortical Circuits lead to Switching Resting-state Functional Connectivity**
Enrique Hansen¹, Demian Battaglia², Andreas Spiegler³, Gustavo Deco⁴, Viktor Jirsa⁵
¹INSERM UMR 1106 — Institut de neurosciences des systèmes, Marseille, France, ²INSERM UMR 1106 — Institut de neurosciences des systèmes, Marseille, France, ³Institut de Neurosciences des Systèmes — Inserm UMR 1106, Aix-Marseille Université, Marseille, France, ⁴Universitat Pompeu Fabra, Barcelona, Spain, ⁵Ctr. Natl. de la Recherche Scientifique (CNRS), Marseille, France
- 1831 BOLD Granger Causality Reflects Vascular Anatomy Across Postprocessing Strategies**
Jeffrey Anderson¹, Taylor Webb¹, Jared Nielsen¹, Justin Cramer², Michael Ferguson¹
¹University of Utah, Salt Lake City, United States, ²University of Utah, Salt Lake City, UT
- 1832 Statistical Evaluation of Connectome Data using Object Oriented Data Analysis**
Linda Larson-Prior^{1,2}, Patricio LaRosa^{3,4}, Terrence Brooks³, Elena Deych³, Berkley Shands³, Fred Prior⁵, William Shannon³
¹Department of Radiology, Washington University, Saint Louis, United States, ²Department of Neurology, Washington University, Saint Louis, MO, ³Department of Medicine, Washington University, Saint Louis, MO, ⁴Predictive Analytic Research Group, TPS, Monsanto, Saint Louis, United States, ⁵Department of Radiology, Washington University, Saint Louis, United States
- 1833 Estimating non-Stationary Functional Connectivity Networks using the SINGLE Algorithm**
Ricardo Pio Monti¹, Peter Hellyer², David Sharp², Robert Leech², Christoforos Anagnostopoulos¹, Giovanni Montana³
¹Department of Mathematics, Imperial College London, London, United Kingdom, ²Computational, Cognitive and Clinical Neuroimaging Laboratory, Imperial College London, London, United Kingdom, ³Department of Biomedical Engineering, Kings College London, London, United Kingdom
- 1834 Individual Differences in Time-Varying Neural Connectivity and Smoking Behavior**
Peter Molenaar¹, Adriene Beltz¹
¹The Pennsylvania State University, University Park, PA
- 1835 Inter-modular Connectivity of Functional Brain Networks Strengthens over Development**
Scott Marek¹, Will Foran¹, Kai Hwang¹, Beatriz Luna¹
¹University of Pittsburgh, Pittsburgh, United States

- 1836 MNET: Network analysis toolbox for integrating structural-functional human brain connectome**
Misun Yoon^{1,2}, Bumhee Park², Jong Doo Lee^{1,2}, Hae-Jeong Park^{1,2}
¹Brain Korea 21 PLUS Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, ²Department of Nuclear Medicine and Radiology, Yonsei University College of Medicine, Seoul, Korea, Republic of
- 1837 Dynamic Modular Organization in Resting-State Human Brain**
Xuhong Liao^{1,2}, Lin Yuan^{3,4}, Zhengjia Dai^{3,4}, Miao Cao^{3,4}, Yufeng Zang^{1,2}, Yong He^{3,4}
¹Center for Cognition and Brain Disorders, Hangzhou Normal University, Hangzhou, China, ²Zhejiang Key Laboratory for Research in Assessment of Cognitive Impairments, Hangzhou, China, ³State Key Laboratory of Cognitive Neuroscience and Learning & IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing, China, ⁴Center for Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal University, Beijing, China
- 1838 Cluster Analysis of Resting-State fMRI Time Series (10-10 EEG related seeds): preliminary results**
Gonzalo Rojas¹, Carlos Montoya², Jaime Cisternas², Marcelo Galvez³
¹Advanced Medical Image Processing Lab, Clinica Las Condes, Santiago, Chile, ²Engineering School, Universidad de los Andes, Santiago, Chile, ³Department of Radiology, Las Condes Clinic, Santiago, Chile
- 1839 New physiological framework for dynamic causal modeling of fMRI data**
Martin Havlicek¹, Alard Roebroeck¹, Karl Friston², Anna Gardumi¹, Kamil Uludağ³
¹Maastricht University, Maastricht, Netherlands, ²University College London, London, United Kingdom, ³Maastricht Brain Imaging Centre, Faculty of Psychology & Neuroscience, Maastricht University, Maastricht, Netherlands
- 1840 Brain regions extraction from rest fMRI using stochastic total-variation dictionary learning**
Gaël Varoquaux¹, Elvis Dohmatob¹, Bertrand Thirion², Dimitris Samaras³, Alexandre Abraham¹
¹INRIA, Saclay, France, ²Parietal Team, INRIA Saclay — Île-de-France, Saclay, France, ³SUNY Stony Brook, Stony Brook, NY
- 1841 Specific changes in global brain activity are associated with specific functional networks**
Dustin Scheinost¹, Xenophon Papademetris¹, R Constable¹
¹Yale University, New Haven, CT
- 1842 Addressing Head Motion Dependencies for Small-World Topologies in Functional Connectomics**
Chao-Gan YAN^{1,2,3}, Cameron Craddock^{1,2}, Yong He^{4,5}, Michael Milham^{1,2}
¹The Nathan Kline Institute for Psychiatric Research, Orangeburg, NY, ²Center for the Developing Brain, Child Mind Institute, New York, NY, ³The Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, New York University Child Study Center, New York, NY, ⁴State key laboratory of cognitive neuroscience and learning, Beijing Normal University, Beijing, China, ⁵Center for Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal University, Beijing, China
- 1843 Functional Connectivity of the Default Mode Network in Parkinson's Disease with Cognitive Impairment**
Maryam Ghahremani¹, Yong Jeong², Jong Chul Ye³
¹Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of, ²KAIST, Daejeon, Korea, Republic of, ³KAIST, Daejeon, Democratic People's Republic Of Korea
- 1844 Analysis of functional network connectivity in bipolar and unipolar depression patients disorders**
Hao He^{1,2}, Jing Sui¹, Qingbao Yu¹, Yuhui Du^{1,3}, Victor Vergara¹, Teresa Victor⁴, Wayne Drevets⁵, Jonathan Savitz⁴, Vince Calhoun^{1,2,6}
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- 1845 Frequency-dependent Functional Hubs in the Human Brain Networks: a Resting-State fMRI Study**
Lei Wang^{1,2,3}, Xuhong Liao^{4,5}, He Yong^{1,2,3}
¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China, ²IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing, China, ³Center for Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal University, Beijing, China, ⁴Center for Cognition and Brain Disorders, Hangzhou Normal University, Hangzhou, China, ⁵Zhejiang Key Laboratory for Research in Assessment of Cognitive Impairments, Hangzhou, China

- 1846 Resting state connectivity dynamics in real-time fMRI using a novel seed-based approach**
Kishore Vakamudi¹, Elena Ackley², Stefan Posse³
¹Department of Physics and Astronomy, University of New Mexico, Albuquerque, United States, ²Department of Neurology, University of New Mexico, Albuquerque, NM, ³Department of Physics and Astronomy, Department of Neurology, University of New Mexico, Albuquerque, NM
- 1847 Phase sensitive multiscale functional connectivity**
Bryan Paton^{1,2,3}, Parnesh Raniga^{1,4}, Gary Egan^{1,2}
¹Monash Biomedical Imaging, Monash University, Melbourne, Australia, ²School of Psychological Sciences, Monash University, Melbourne, Australia, ³Philosophy & Cognition Lab, Monash University, Melbourne, Australia, ⁴CSIRO Preventative Health Flagship, CSIRO Computational Informatics, Herston, Australia
- 1848 Dwelling in the rich club: Connectomic determinants of brain dynamics**
Michael Breakspear¹, Leonardo L. Gollo¹
¹QIMR Berghofer Medical Research Institute, Brisbane, Australia
- 1849 Inter-Subject variability in resting-state fMRI across brain regions using seed-based approach**
Kishore Vakamudi¹, Elena Ackley², Stefan Posse³
¹Department of Physics and Astronomy, University of New Mexico, Albuquerque, United States, ²Department of Neurology, University of New Mexico, Albuquerque, NM, ³Department of Physics and Astronomy, Department of Neurology, University of New Mexico, Albuquerque, NM
- 1850 How to define structural connectivity in relation to functional connectivity**
Chongwon Pae^{1,2}, Seong-yong Park¹, Bumhee Park², Maeng-Keun Oh², Jong Doo Lee^{1,2}, Hae-Jeong Park^{1,2}
¹Brain Korea 21 PLUS Project for Medical Science, Yonsei University College of Medicine, Seoul, Korea, Republic of, ²Department of Nuclear Medicine and Radiology, Yonsei University College of Medicine, Seoul, Korea, Republic of
- 1851 Individual-level covariates adjustment in structural equation modeling**
Dawei Liu¹, Jeffrey Long², Jatin Vaidya³, Jane Paulsen⁴
¹The University of Iowa, Iowa City, United States, ²University of Iowa, Iowa City, IA, ³University of Iowa, N/A, ⁴The University of Iowa, Iowa City, IA

**IMAGE REGISTRATION AND
COMPUTATIONAL ANATOMY**

- 1852 A pipeline for histology to in-vivo registration of surgically resected specimens in focal epilepsy**
Maged Goubran¹, Catherine Currie¹, Sandrine de Ribaupierre², Robert Hammond³, Jorge Burneo², Andrew Parrent², Terry Peters¹, Ali Khan¹
¹Robarts Research Institute, London, Canada, ²Department of Clinical Neurological Sciences, Western University, London, Canada, ³Department of Pathology, Western University, London, Canada
- 1853 BigBrain: the Processing Pipeline for 3D Reconstruction**
Lindsay B. Lewis¹, Claude Lepage¹, Sebastian Bludau², Karl Zilles², Katrin Amunts², Alan C. Evans¹
¹Montreal Neurological Institute, McGill University, Montreal, Canada, ²Institute of Neuroscience and Medicine, Research Centre Jülich, Jülich, Germany
- 1854 Three-dimensional Reconstruction of Histological Blockface Images using ID-encoded Markers**
Martin Schober¹, Philipp Schlömer¹, Tim Hütz¹, Markus Cremer¹, Hartmut Mohlberg¹, Katrin Amunts^{1,2}, Markus Axer¹
¹Research Centre Jülich (INM-1), Jülich, Germany, ²C. and O. Vogt Institute for Brain Research, Heinrich Heine University Düsseldorf, Düsseldorf, Germany
- 1855 A new metric for the evaluation of non-linear registration methods**
Andre Santos Ribeiro¹, David Nutt¹, John McGonigle¹
¹Imperial College London, London, United Kingdom
- 1856 A new framework for processing BigBrain 2 on massively parallel supercomputers**
Hartmut Mohlberg¹, Bastian Tweddel², Claude Lepage³, Alan Evans³, Katrin Amunts^{1,4}
¹Institute of Neurosciences and Medicine (INM-1), Research Centre Jülich, Jülich, Germany, ²Institute for Advanced Simulation (IAS), Jülich Supercomputing Centre (JSC), Jülich, Germany, ³Montreal Neurological Institute, Montreal, Quebec, Canada, ⁴C. and O. Vogt Institute of Brain Research, Heinrich Heine University, Düsseldorf, Germany
- 1857 Minimum referential 10/20 system: Quantitative cranial landmark setting method for MRI**
Daisuke Tsuzuki^{1,2,3}, Hama Watanabe³, Ippeita Dan^{4,2}, Gentaro Taga³
¹Research and Development Initiative, Chuo University, Tokyo, Japan, ²Functional Brain Science Laboratory, Jichi Medical University, Tochigi, Japan, ³Graduate School of Education, University of Tokyo, Tokyo, Japan, ⁴Applied Cognitive Neuroscience Laboratory, Chuo University, Tokyo, Japan

- 1858 Comparison of voxel-based and tract-based affine registration for tract segmentation**
NGUYEN THIEN BAO^{1,2}, Paolo Avesani¹, Lauren O'Donnell²
¹Bruno Kessler Foundation and University of Trento, Trento, Italy, ²Brigham and Women's Hospital, Harvard Medical School, Boston, MA
- 1859 Estimation of cortical thickness from T1-weighted MRI images using tissue fractions**
Anand Joshi¹, Chitresh Bhushan¹, David Shattuck², Richard M. Leahy¹
¹University of Southern California, Los Angeles, CA, ²University of California, Los Angeles, CA
- 1860 Structural brain networks are altered in Childhood Absence Epilepsy**
Evan Curwood¹, Mangor Pedersen², David Abbott^{1,2}, Patrick Carney¹, Anne Berg³, Graeme Jackson^{1,2}
¹Florey Institute of Neuroscience and Mental Health, Melbourne, Australia, ²The University of Melbourne, Melbourne, Australia, ³Anne and Robert H. Lurie Children's Hospital, Chicago, IL
- 1861 Automated method for longitudinal mapping of cortical thickness using local search approach**
Kichang Kwak¹, Uicheul Yoon², Eun Kyoung Kim³, Jong-Min Lee³
¹Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of, ²Department of Biomedical Engineering, Catholic University of Daegu, Gyeongsan-si, Korea, Republic of, ³Department of Biomedical Engineering, Hanyang University, Seoul, Korea, Republic of
- 1862 Determining Corpus Callosum Thickness Using Elastic Shape Matching**
Brandon Ayers¹, Eileen Luders², Nicolas Cherbuin³, Shantanu Joshi¹
¹University of California, Los Angeles, Los Angeles, United States, ²UCLA, Dept. Of Neurology, Los Angeles, United States, ³Australian National University, Canberra, ACT
- 1863 Hybrid Topology Correction of Brain Surfaces**
Christian Gaser¹
¹Jena University Hospital, Jena, Germany
- 1864 A Statistical Toolbox for BrainSuite**
Shantanu Joshi¹, Roger Woods¹, Anand Joshi², Scott Fears¹, Noor Al-Sharif¹, Richard Leahy², David Shattuck¹
¹University of California, Los Angeles, Los Angeles, CA, ²University of Southern California, Los Angeles, CA
- 1865 Spatial Normalization of Abnormal, Non-lesioned Brains**
Anita Montagna¹, Pablo Ripollés Vidal², Sean Froudist Walsh³, Chiara Nosarti⁴
¹Institute of Psychiatry, Centre for the Developing Brain — King's College London, London, United Kingdom, ²Cognition and Brain Plasticity Group (IDIBELL), Barcelona, Spain, ³Institute of Psychiatry — King's College London, London, United Kingdom, ⁴Institute of Psychiatry — King's College London, London, United Kingdom
- 1866 Evaluating nonlinear coregistration of BOLD EPI and T1 images**
Julia Huntenburg¹, Krzysztof Gorgolewski², Alfred Anwander¹, Daniel Margulies¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Max Planck Institute for Human Brain and Cognitive Sciences, Leipzig, Germany

Emotion and Motivation

EMOTIONAL LEARNING

- 1867 Nothing is safe: Intolerance of uncertainty predicts delayed extinction learning**
Jayne Morriss¹, Anastasia Christakou¹, Carien van Reekum¹
¹University of Reading, Reading, United Kingdom
- 1868 Differential Effects of Self- and Socially-Induced Emotion Regulation on Aversive Prediction Error**
Satja Mulej Bratec^{1,2}, Xiyao Xie³, Gabriele Schmid⁴, Afra Wohlschläger¹, Valentin Riedl¹, Christian Sorg¹
¹TUM-NIC Neuroimaging Center, Technische Universität München, Munich, Germany, ²Graduate School of Systemic Neurosciences, Ludwig-Maximilians-Universität München, Munich, Germany, ³Department of Psychology, Ludwig-Maximilians-Universität München, Munich, Germany, ⁴Department of Psychosomatics and Psychotherapy, Technische Universität München, Munich, Germany
- 1869 Down-regulation of amygdala activation by real-time fMRI neurofeedback**
Christian Paret¹, Rosemarie Kluetsch¹, Matthias Ruf¹, Traute Demirakca², Gabriele Ende¹, Christian Schmah³
¹Central Institute of Mental Health, Mannheim, Germany, ²Central Institut Of Mental Health, Germany, ³Department of Psychosomatic Medicine and Psychotherapy, Central Institute of Mental Health, Mannheim, Germany

- 1870 Learning control over emotion networks with real-time fMRI connectivity feedback**
Yury Koush¹, Rey Gwladys², Swann Pichon², Sebastian Rieger², David Linden³, Dimitri Van De Ville¹, Patrik Vuilleumier², Frank Scharnowski⁴
¹University of Geneva, EPFL Lausanne, Lausanne, Switzerland, ²University of Geneva, Geneva, Switzerland, ³Cardiff University, Cardiff, United Kingdom, ⁴University of Geneva, EPFL Lausanne, Geneva, Switzerland
- 1871 Self-regulation of ACC in patients with PTSD: an fMRI-neurofeedback study using social reinforcement**
Eliza M. Alawi^{1,2}, Anastasia Kacela¹, Krystyna Mathiak³, Guido Flatten⁴, Michael Zvyagintsev^{1,2}, Klaus Mathiak^{1,2}
¹Department of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, ²JARA-Brain, Translational Brain Medicine, Aachen, Germany, ³Department of Child and Adolescent Psychiatry, Psychotherapy & Psychosomatic, RWTH Aachen University, Aachen, Germany, ⁴Euregio-Institut für Psychosomatik und Psychotraumatologie, Aachen, Germany
- 1872 Long-term expression & reinstatement of contextual fear and extinction memories two indepent samples**
Tina Lonsdorf¹, Jan Haaker¹, Raffael Kalisch^{1,2}
¹Institute for Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ²Neuroimaging Center Mainz (NIC), Focus Program Translational Neuroscience (FTN), Johannes Gutenberg University Medical Center, Mainz, Germany
- 1873 Real-Time fMRI Neurofeedback of the Amygdala in Combat-Related PTSD**
Raquel Phillips¹, Vadim Zotev¹, Han Yuan¹, Kymberly Young¹, Chung Ki Wong¹, Brent Wurfel¹, Frank Krueger², Matthew Feldner³, Jerzy Bodurka¹
¹Laureate Institute for Brain Research, Tulsa, OK, United States, ²George Mason University, Fairfax, VA, United States, ³University of Arkansas, Fayetteville, AR, United States
- 1874 Neural correlates of risk and resilience to anxiety in healthy youths with a history of adversity**
Valérie La Buissonnière Ariza^{1,2}, Jean Séguin^{3,2}, Marouane Nassim⁴, Michel Boivin⁵, Daniel Pine⁶, Franco Lepore^{3,7}, Richard Tremblay⁸, Françoise Maheu^{3,7}
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- 1875 Temporal dynamics in the fear-conditioning network**
Chrysa Lithari¹, Stephan Moratti², Nathan Weisz¹
¹Università degli Studi di Trento, Mattarello, Italy, ²Complutense University of Madrid, Madrid, Spain
- 1876 Oxytocin facilitates learning with social feedback and activity in emotion and reward regions**
Qi Song¹, Jiehui Hu¹, Lizhu Luo¹, Shan Gao¹, Benjamin Becker², Qiyong Gong³, Rene Hurlemann², Keith Kendrick⁴
¹University of Electronic Science and Technology of China, Chengdu, China, ²University of Bonn, Bonn, Germany, ³Huaxi MR Research Center, Department of Radiology, West China Hospital of Sichuan University, Chengdu, China, ⁴Key Laboratory for Neuroinformation, School of Life Science and Technology, University of Electronic, Chengdu, China
- 1877 Context effects on extinction and renewal of conditioned visceral pain-related fear memories**
Adriane Icenhour¹, Joswin Kattoor¹, Sarah Hampel¹, Marc Schlamann², Sven Benson¹, Sigrid Eisenbruch¹
¹Inst. of Medical Psychology & Behavioral Immunobiology, University Hospital Essen, Essen, Germany, ²Inst. of Diagnostic and Interventional Radiology and Neuroradiology, University Hospital Essen, Essen, Germany
- 1878 Effects of instructed extinction on neural correlates of conditioned fear**
Laura Kress¹, Rudolf Stark¹, Dieter Vait², Andrea Hermann¹
¹Department of Psychotherapy and Systems Neuroscience, Justus Liebig University, Giessen, Germany, ²Bender Institute of Neuroimaging, Justus Liebig University, Giessen, Germany
- 1879 Effects of reinforcement schedules on fear extinction learning in healthy human subjects**
Laura Leuchs¹, Ines Eidner¹, Michael Czisch¹, Victor Spoormaker¹
¹Max Planck Institute of Psychiatry, Munich, Germany

- 1880 Semantic conditioning: Building fear associations by incidental pairing with fear related words**
Yunbo Yang¹, André Wittmann², Ulrike Lueken³, Katharina Holtz⁴, Martin Herrmann⁵, Sass Katharina⁶, Andreas Jansen¹, Carsten Konrad¹, Andreas Ströhle², Bettina Pfeleiderer⁷, Alfons Hamm⁴, Jürgen Deckert⁵, Volker Arolt⁸, Hans-Ulrich Wittchen⁹, Tilo Kircher¹, Benjamin Straube¹
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- 1881 Parallel acquisition of brain activity and orbicularis EMG during fear conditioning**
Katja Lindner¹, Julia Wendt¹, Heino Mohrmann¹, Jörg Pfannmöller², Alfons Hamm¹
¹Department of Psychology, University of Greifswald, Germany, ²Functional Imaging Unit, Center of Diagnostic Radiology and Neuroradiology, University of Greifswald, Germany

EMOTIONAL PERCEPTION

- 1882 Spatiotemporal Dynamics of Affective Picture Processing Revealed by Intracranial Gamma Modulations**
Olivier Boucher¹, Fabien D'Hondt², Julie Tremblay³, Franco Lepore², Maryse Lassonde², Phetsamone Vannasing³, Alain Bouthillier⁴, Dang Nguyen⁴
¹Université de Montréal, Montréal, Canada, ²Université de Montréal, Montréal, Quebec, ³Centre de recherche du CHU Sainte-Justine, Montréal, Quebec, ⁴Centre Hospitalier de l'Université de Montréal, Montréal, Quebec

- 1883 Neural Correlates of Humor as Revealed by Parametric fMRI**
Tetsuya Iidaka¹, Haruo Isoda², Akiko Hayashi²
¹Nagoya University, Nagoya, Japan, ²Nagoya University, Nagoya, Japan

- 1884 Brain-Derived Neurotrophic Factor and Amygdala Habituation in Borderline Personality Disorder**
M. Mercedes Perez-Rodriguez¹, Antonia New², Kim Goldstein², Daniel Rosell², Qiaoping Yuan³, Zhifeng Zhou³, Colin Hodgkinson⁴, David Goldman⁴, Larry Siever², Erin Hazlett²
¹Icahn School of Medicine at Mount Sinai and MIRECC at James J Peters VAMC, New York, United States, ²Icahn School of Medicine at Mount Sinai and MIRECC at James J Peters VAMC, New York, NY, ³Laboratory of Neurogenetics, National Institute on Alcohol Abuse and Alcoholism, NIH, Bethesda, MD, ⁴NIH-NIDA, Bethesda, United States

- 1885 Brain Correlates of Psychological Complexes. EEG and fMRI During the Word Association Test**
Hugo Sandoval¹, Philip Bechte², Stephen Sands³, Andrew Sands³, Michael Escamilla¹
¹Texas Tech PLFSOM COEN, El Paso, TX, ²C.G. Jung Institute, Dallas, TX, ³Sands Research, El Paso, TX

- 1886 The functional significance of midcingulate activity during empathy for pain**
Xiaochun Han¹, Zhenhao Shi¹, Yi Liu¹, Siyang Luo¹, Kang He¹, Kunlin Wei¹, Shihui Han¹
¹Peking University, Beijing, China

- 1887 Meditation Modulates both Early and Late Affective Processing: An ERP Study**
Nerissa Ho¹, Delin Sun¹, Kin-hung Ting², Chetwyn Chan², Tatia MC Lee¹
¹Laboratory of Cognitive Affective Neuroscience, The University of Hong Kong, Hong Kong, Hong Kong, ²Applied Cognitive Neuroscience Laboratory, The Hong Kong Polytechnic University, Hong Kong, Hong Kong

- 1888 Transient and sustained BOLD signal time courses affect the detection of brain activation in emotion**
Christian Pare¹, Rosemarie Kluetsch¹, Matthias Ruf¹, Traute Demirakca², Christian Schmah³, Gabriele Ende¹
¹Central Institute of Mental Health, Mannheim, Germany, ²Central Institut Of Mental Health,, Germany, ³Department of Psychosomatic Medicine and Psychotherapy, Central Institute of Mental Health, mannheim, Germany

- 1889 The effect of hurtful words by peer group on brain activity in adolescence**
Sang Won Lee¹, Jeewook Choi², Jongsun Lee¹, Jae Hyun Yoo¹, KO WOON KIM¹, Sooyun Cho¹, Dongchan Kim³, HyunWook Park³, bum seok Jeong¹
¹Graduate school of medical science and engineering, KAIST, Daejeon, Korea, Republic of, ²Dept. of Psychiatry, Catholic University, Daejeon St. Mary's Hospital, Daejeon, Korea, Republic of, ³Department of Electrical Engineering, KAIST, Daejeon, Korea, Republic of

- 1890 Differences in gamma-band neural synchronies between pleasant and unpleasant pictures processing**
Jeong Woo Choi¹, Kwangsu Cha¹, Kyung Hwan Kim¹
¹Yonsei University, Wonju, Republic of Korea
- 1891 Low Resilience — When The Brain Is Not Well Connected To The Body**
Lori Haase¹, Jennifer Stewart², Brittany Youssef², Sara Isakovic², Douglas Johnson³, Martin Paulus²
¹UCSD, San Diego, United States, ²UCSD, San Diego, CA, ³Navel Health Research Center, San Diego, CA
- 1892 Brain Network for Text-based Emoticons**
KO WOON KIM¹, Jeewook Choi², Sang Won Lee³, bum seek Jeong⁴
¹KAIST, Daejeon, Korea, Republic of, ²Dept. of Psychiatry, Catholic University, Daejeon St. Mary's Hospital, Daejeon, Korea, Republic of, ³Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of, ⁴Korea Advanced Institute of Science and Technology, Daejeon, Korea, Republic of
- 1893 Brain Synchronization in the Perception of Emotional Expressions of Natural and Unnatural Dynamics**
Dionysios Perdakis¹, Jakob Volhard¹, Viktor Müller¹, Kathrin Kaulard², Timothy Brick¹, Christian Wallraven³, Ulman Lindenberger¹
¹MPI for Human Development, Berlin, Germany, ²MPI for Biological Cybernetics, Tübingen, Germany, ³Korea University, Seoul, Korea, Republic of
- 1894 Cerebral processing of non-verbal affective vocalizations: effects of acoustics and emotions**
Emilie SALVIA¹, Patricia Bestelmeyer², Sonja Kotz³, Guillaume Rousselet⁴, Cyril Pernet⁵, Joachim Gross¹, Pascal Belin⁶
¹University of Glasgow, GLASGOW, United Kingdom, ²Bangor University, Bangor, Gwynedd, United Kingdom, ³Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ⁴University of Glasgow, N/A, ⁵University of Edinburgh, N/A, ⁶Institute of Neuroscience and Psychology, University of Glasgow, Glasgow, United Kingdom
- 1895 Mindful breathing decreases amygdala activation and negativity ratings of negative pictures**
Anselm Doll^{1,2}, Christine (Joyce) Boucard³, Britta Hölzel⁴, Christian Sorg⁵
¹Neuroimaging Center Technische Universität München (TUM-NIC), München, Germany, ²Munich Center for Neurosciences — Brain and Mind, Ludwig-Maximilians-Universität, München, Germany, ³Neuroimaging Center Technische Universität München (TUM-NIC), Munich, Bavaria, ⁴Charité University medicine, Institute of Medical Psychology, Berlin., ⁵Neuroimaging Center Technische Universität München (TUM-NIC), Munich, Germany
- 1896 Incidental processing of emotional facial expressions: correlates of visual field bias in women**
Dina Wittfoth-Schardt¹, Harald Werthebach¹, Heinrich Lanfermann¹
¹Hannover Medical School, Hannover, Germany
- 1897 Phasic BOLD activity in the locus coeruleus and pupil dilation at different levels of tonic arousal**
Silvy Collin¹, Lycia de Voogd², Markus Barth¹, Guillén Fernández², Erno Hermans²
¹Donders Institute for Brain, Cognition and Behaviour, Radboud University, Nijmegen, Netherlands, ²Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Centre, Nijmegen, Netherlands
- 1898 Dissociation between interoceptive and emotional awareness in alexithymia**
Yuri Terasawa^{1,2,3}, Yoshiya Moriguchi¹, Yusuke Kanayama^{1,4}, Kentaro Oba^{5,1,6}, Yuki Motomura^{7,8,3}, Satoshi Umeda², Kazuo Mishima¹
¹National Center of Neurology and Psychiatry, Tokyo, Japan, ²Keio University, Tokyo, Japan, ³Japan Society for the Promotion of Science (JSPS), Tokyo, Japan, ⁴Waseda University, Tokyo, Japan, ⁵Tohoku University, Sendai, Japan, ⁶Tokyo Metropolitan University, Tokyo, Japan, ⁷NCNP, Tokyo, Japan, ⁸Kyusyu University, Fukuoka, Japan
- 1899 Frontal asymmetry over EEG power spectra**
Lauri Ahonen¹, Minna Huotilainen¹
¹Finnish Institute of Occupational Health, Helsinki, Finland
- 1900 The interplay between emotions and high-level semantics on working memory encoding and retrieval**
Serena Mastroberardino¹, Tiziana Pedale², Macaluso Emiliano¹, Valerio Santangelo³
¹Cognitive Neuroscience Group, Neuroimaging Laboratory, Santa Lucia Foundation, Rome, Italy, ²Department of Psychology, Sapienza University of Rome, Rome, Italy, ³Department of Philosophy, Social, Human and Educational Sciences, University of Perugia, Perugia, Italy
- 1901 Distinct cerebellar lobules encode arousal and valence in specific time windows: an MEG study**
Charis Styliadis¹, Andreas Ioannides², Panagiotis Bamidis¹, Christos Papadelis³
¹School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece, ²Lab for Human Brain Dynamics, AAI Scientific Cultural Services Ltd, Nicosia, Cyprus, ³Department of Neurology, Boston Children's Hospital, Harvard Medical School, Boston, MA, USA

- 1902 Effects of the Menstrual Cycle and Neuroticism on Emotion Evaluation: Evidences From ERP**
Wenjuan Zhang¹, Renlai Zhou², Qingguo Wang³, Yan Zhao³, Yanfeng Liu³
¹Xidian University, Xi'an, China, ²Beijing Normal University, Beijing, China, ³Beijing University of Chinese Medicine, Beijing, China
- 1903 A face in the crowd — A simultaneous EEG fMRI study**
Barbara Reese^{1,2}, Christina Regenbogen^{3,1}, Thilo Kellermann^{1,2}, Patrick Schelenz^{1,2}, Bruce Turetsky⁴, Frank Schneider^{1,2,4}, Ute Habel^{1,2}
¹RWTH Aachen University, Aachen, Germany, ²Jülich-Aachen-Research Alliance, Jülich-Aachen, Germany, ³Karolinska Institutet, Stockholm, Sweden, ⁴Neuropsychiatry Division, Department of Psychiatry, University of Pennsylvania School of Medicine, Philadelphia, PA
- 1904 The role of GABA in fear-related BOLD responses**
Ilona Lipp¹, John Evans¹, Kevin Murphy¹, Xavier Caseras¹, Richard Wise¹
¹Cardiff University, Cardiff, United Kingdom
- 1905 Neural Correlates of Olfactory Disgust Processing**
Lea Meier¹, Hergen Friedrich², Andrea Federspiel¹, Kay Jann^{3,1}, Basile Landis^{2,4}, Roland Wiest⁵, Werner Strik¹, Thomas Dierks¹
¹Department of Psychiatric Neurophysiology, University Hospital of Psychiatry, University of Bern, Bern, Switzerland, ²Department of ORL, Head and Neck Surgery, Inselspital, University of Bern, Bern, Switzerland, ³Ahmanson-Lovelace Brain Mapping Center, Department of Neurology, University of California LA, Los Angeles, United States, ⁴Department of ORL, Geneva Neuroscience Center (CMU), University of Geneva Hospitals, Geneva, Switzerland, ⁵Institute for Diagnostic and Interventional Neuroradiology, University of Bern, Bern, Switzerland
- 1906 Attention enhances processing of emotional words in language-specific brain areas**
Martin Wegrzyn¹, Cornelia Herbert², Thomas Ethofer³, Tobias Flaisch⁴, Johanna Kissler⁵
¹University of Bielefeld, Bielefeld, Germany, ²Department of Psychology, University of Würzburg, Würzburg, Germany, ³Department of General Psychiatry, University of Tübingen, Tübingen, Germany, ⁴Department of Psychology, University of Konstanz, Konstanz, Germany, ⁵Department of Psychology, University of Bielefeld, Bielefeld, Germany
- 1907 Task and emotion effects on early visual ERPs to emotional facial expressions**
Elizabeth daSilva¹, Kirsten Crager¹, Aina Puce¹
¹Indiana University, Bloomington, IN, USA
- 1908 Emotional Natural Stimuli Revealed Altered Neural Synchronisation in Major Depressive Disorder**
Christine Guo¹, Vinh Nguyen¹, Matthew Hyett¹, Michael Breakspear¹, Gordon Parker²
¹QIMR Berghofer Medical Research Institute, Brisbane, QLD, Australia, ²Black Dog Institute, Sydney, NSW, Australia
- 1909 Neural Substrates of Verbal Humor Processing: Evidence from fMRI and ERP Studies**
Midori Shibata¹, Yuri Terasawa², Satoshi Umeda³
¹Hokkaido University, Sapporo, Japan, ²National Center of Neurology and Psychiatry, Tokyo, Japan, ³Keio University, Tokyo, Japan
- 1910 Emotional context-dependent brain activation in face encoding**
Chang-hyun Park¹, Wang-Youn Won², Kyoung-Uk Lee²
¹Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of, ²The Catholic University of Korea School of Medicine, Seoul, Korea, Republic of
- 1911 Dual influence of self-relevance on ambiguous emotion categorization in humans**
Marwa El Zein¹, Valentin Wyart², Julie GREZES²
¹Laboratoire des Neurosciences Cognitives, INSERM U960, Paris, France, ²Laboratoire de Neuroscience Cognitive, INSERM U960, Paris, France
- 1912 Time Course of Periaqueductal Gray Activation during Active and Passive Coping with Threat**
Julia Wendt¹, Cyril Costines¹, Katja Lindner¹, Jörg Pfannmöller², Alfons Hamm¹, Andreas Löw¹
¹Department of Biological and Clinical Psychology, University of Greifswald, Greifswald, Germany, ²University Medicine Greifswald, Greifswald, Germany
- 1913 Similar Brain Activations but Different Connectivity during Different Emotion Regulation Strategies**
Denise Dörfel^{1,2}, Susanne Erk¹, Henrik Walter¹
¹Division of Mind and Brain Research, Charité Universitätsmedizin Berlin, Berlin, Germany, ²Technische Universität Dresden, Department of Psychology, Work and Organizational Psychology, Dresden, Germany
- 1914 Neural activation during cartoon consumption and appreciation in healthy subjects — an fMRI study**
Anja Rabus¹, Henrike Broehl¹, Irina Falkenberg¹, Tilo Kircher², Arne Nagels¹
¹Department of Psychiatry and Psychotherapy, Philipps-University Marburg, Marburg, Germany, ²Klinik für Psychiatrie und Psychotherapie der Philipps-Universität Marburg, Marburg, Germany

- 1915 Sex differences in the adolescent brain under swearing words processing**
Ji-Won Chun¹, Woojong Yi^{1,2}, Se-Jin Ryu^{1,3}, Dai-Jin Kim¹
¹The Catholic University of Korea College of Medicine, Seoul, Korea, Republic of, ²Interdisciplinary Program in Cognitive Science, Seoul National University, Seoul, Korea, Republic of, ³Department of Library and information Science, Yonsei University, Seoul, Korea, Republic of
- 1916 Empathy in Cooperative and Non-Cooperative Context**
Azalea Reyes-Aguilar¹, Erick Pasaye¹, Leopoldo González-Santos¹, Fernando Barrios¹
¹Universidad Nacional Autónoma de México, Querétaro, Mexico
- 1917 Effect of parasympathetic stimulation on brain activity during processing of fearful expressions**
Elena Makovac¹, Barbara Basile¹, Sarah Garfinkel^{2,3}, Mara Cercignani⁴, Giovanni Calcagnini⁵, Andrea Bassi⁶, Eugenio Mattei⁷, Daniela Agalliu⁸, Marco Bozzali¹, Hugo Critchley^{2,3}
¹Neuroimaging Laboratory, Santa Lucia Foundation, Rome, Italy, ²Psychiatry, Brighton and Sussex Medical School, University of Sussex, Falmer, Brighton, United Kingdom, ³Sackler Centre for Consciousness Science, University of Sussex, Falmer, Brighton, United Kingdom, ⁴Brighton & Sussex Medical School, Clinical Imaging Sciences Centre, University of Sussex, Brighton, United Kingdom, ⁵Department of Technology and Health, Italian Institute of Health, Rome, Italy, ⁶Department of Clinical and Behavioral Neurology, Santa Lucia Foundation, Rome, Italy, ⁷Department of Technology and Health, Italian Institute of Health, Rome, United Kingdom
- 1918 Neural correlates of attachment representations — an fMRI Study**
Karin Labek¹, Roberto Viviani^{2,1}, Anna Buchheim¹
¹University of Innsbruck, Innsbruck, Austria, ²University of Ulm, Ulm, Germany
- 1919 Affective Mapping: An Activation Likelihood Estimation (ALE) Meta-analysis**
Lauren Kirby¹, Jennifer Robinson²
¹Auburn University, Auburn, AL, ²Auburn University, Auburn, AL, United States
- 1920 Mapping the neural basis of affective space in humans with fMRI**
Heini Heikkilä¹, Lara Farzaneh Eftehadian¹, Riitta Hari², Patrik Vuilleumier³, Mikko Sams^{4,5}, Lauri Nummenmaa^{4,2,6}
¹Brain and Mind Laboratory, BECS, Aalto University, Espoo, Finland, ²O. V. Lounasmaa Laboratory, Aalto University, Espoo, Finland, ³University of Geneva, Geneva, Switzerland, ⁴Brain and Mind Laboratory, BECS, Aalto University, School of science, Espoo, Finland, ⁵Advanced Magnetic Imaging (AMI) Centre, Aalto Neuroimaging, Espoo, Finland, ⁶Turku PET Centre, Turku, Finland
- 1921 Inter-individual differences in cognitive control predict amygdala reactivity to fearful faces**
Swann Pichon^{1,2}, Sebastian Rieger¹, Patrik Vuilleumier¹
¹University of Geneva, Geneva, Switzerland, ²Swiss center for affective sciences, Geneva, Switzerland
- 1922 Structural connectivity predicts amygdala response during emotional face processing in children**
Tiffany Nash¹, Tuong-Vi Nguyen^{1,2}, Nicholas Turner¹, Philip Kohn¹, Katherine Roe¹, Jonathan Kippenhan¹, Deborah Boyle², Pedro Martinez², Shau-Ming Wei¹, Hillary Raab¹, Peter Schmidt², Karen Berman¹
¹Section on Integrative Neuroimaging, NIMH, NIH, Bethesda, MD, ²Section on Behavioral Endocrinology, NIMH, NIH, Bethesda, MD
- 1923 The Impact of Neuroticism on Neurophysiological and Affective Responses to Infant Crying**
Isabella Mutschler^{1,2}, Ursula Kirmse³, Tina Schweizer⁴, Birgit Wieckhorst⁴, Michael Pluess⁵, Markus Klarhöfer⁶, Frank Wilhelm⁷, Erich Seifritz⁸, Tonio Ball⁹
¹Department of Neuroscience, University of California San Diego (UCSD), La Jolla, United States, ²Department of Psychology, Division of Clinical Psychology and Epidemiology, University Basel, Basel, Switzerland, ³Department of Psychology, University of Konstanz, Konstanz, Germany, ⁴Department of Psychology, Division of Clinical Psychology and Epidemiology, University Basel, Basel, Switzerland, ⁵Queen Mary University of London, London, United Kingdom, ⁶MR-Physics, University Hospital Basel, Basel, Switzerland, ⁷Department of Clinical Psychology, Psychotherapy, and Health Psychology, University of Salzburg, Salzburg, Austria, ⁸Department of Psychiatry, Psychotherapy and Psychosomatics Psychiatric Hospital, Zürich, Switzerland, ⁹University Medical Center, University of Freiburg, Freiburg, Germany

- 1924 Functional role of the amygdala subnuclei: A high-resolution fMRI study of emotional processing**
Stanislau Hrybowski¹, Arash Sereshki¹, Tyler Rolheiser², Andrea Shafer³, Christopher Madan³, Corey Baron⁴, Fraser Olsen⁵, Christian Beaulieu⁶, Peter Seres⁷, Nikolai Malykhin⁶
¹Centre for Neuroscience, University of Alberta, Edmonton, Alberta, Canada, ²Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada, ³Department of Psychology, University of Alberta, Edmonton, Alberta, Canada, ⁴Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada, ⁵Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada, ⁶Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada, ⁷Department of Biomedical Engineering, University of Alberta, Edmonton, Alberta, Canada
- 1925 Resting-State Functional Connectivity Patterns of Blood Pressure: Links to Emotional Dampening?**
Lina Schaare¹, Christiane Rohr^{1,2}, Daniel Margulies^{1,2}, André Pampel¹, Miray Erbey^{3,2}, Andrea Reiter¹, Josefin Roebbig¹, Maria Dreyer¹, Anahit Babayan¹, Arno Villringer^{1,2}
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Mind-Brain Institute, Berlin School of Mind and Brain, Humboldt University, Berlin, Germany, ³Max Planck Institute for Human Development, Humboldt-Universität zu, Berlin, Germany
- 1926 Childhood trauma exposure disrupts neural and behavioral systems for emotional conflict control**
Hilary Marusak¹, Angela Vila², Stephen Shen³, Kayla Martin³, Amit Etkin⁴, Moriah Thomason⁵
¹Wayne State University School of Medicine, Detroit, United States, ²Wayne State University, Detroit, MI, ³Wayne State University School of Medicine, Detroit, MI, ⁴Stanford University, Palo Alto, CA, ⁵Wayne State University, Detroit, United States
- 1927 Neural correlates of the body inversion effect for pride and shame expressions**
Cade Warren¹, Phillip Digiacomo², Kaitlin Krebs¹, Christopher Rorden¹
¹University of South Carolina, Columbia, SC, United States, ²University of Virginia, Charlottesville, VA, United States
- 1928 Postpartum Depression & Brain Response to Infants: Amygdala-AMPFC Connectivity & Early Maternal Care**
Kathleen Wonch¹, Jenniifer Barrett¹, Wil Cunningham¹, Alison Fleming¹, Geoffrey Hall², Meir Steiner³, Cynthia De Medeiros¹
¹University of Toronto, Toronto, Canada, ²McMaster University, Hamilton, Canada, ³St. Joseph's Healthcare, Hamilton, Canada

- 1929 Event-related potentials and oscillatory activity during the cognitive reappraisal of angry faces**
Fern Jaspers-Fayer¹, Matthias Ertl², Gregor Leicht³, Nenad Polomac⁴, Christoph Mulert⁵
¹Simon Fraser University, Vancouver, Canada, ²Department of Psychiatry and Psychotherapy University Medical Centre Hamburg-Eppendorf, Hamburg, Germany, ³University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ⁴Psychiatry Neuroimaging Branch, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ⁵Department of Psychiatry, Hamburg, Germany

REWARD AND PUNISHMENT

- 1930 Feedback that confirms reward expectation triggers auditory cortex activity**
Tina Weis^{1,2}, Andre Brechmann³, Sebastian Puschmann^{1,4}, Christiane Thiel^{1,4,5}
¹Biological Psychology Lab, Institute of Psychology, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany, ²Cognitive and Developmental Psychology, Faculty Social Science, Technical University Kaiserslautern, Kaiserslautern, Germany, ³Leibniz Institute of Neurobiology, Special Lab Non-Invasive Brain Imaging, Magdeburg, Germany, ⁴Cluster of Excellence, Hearing4all, Carl-von-Ossietzky University, Oldenburg, Germany, ⁵Research Center Neurosensory Science, Carl-von-Ossietzky University, Oldenburg, Germany
- 1931 Nicotine enhances modulation of food-cue reactivity by leptin and ghrelin in the vmPFC**
Michael Smolka¹, Nils Kroemer¹, Franziska Wuttig¹, Ulrich Zimmermann¹
¹Technische Universität Dresden, Dresden, Germany
- 1932 Early effects of reward anticipation are modulated by dopaminergic stimulation**
Thore Apitz¹, Nico Bunzeck^{1,2}
¹Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ²Department of Psychology, University of Luebeck, Luebeck, Germany
- 1933 Social reputations make individuals with higher social anxiety less happy**
Aya Sogame¹, Atsushi Sekiguchi², Tsuyoshi Araki³, Yuka Kotozaki³, Yuki Yamamoto³, Motoaki Sugiura⁴, Ryuta Kawashima⁵
¹School of Medicine, Tohoku University, Sendai, Japan, ²IDAC, Tohoku university, Sendai, Japan, ³IDAC, Tohoku University, Sendai, Japan, ⁴IDAC, Tohoku University, Okazaki, Japan, ⁵IDAC, Tohoku University, Sendai, Japan

- 1934 Decomposing Insular Networks of Craving: Ratings of Appetite Involve Functionally Distinct Networks**
Nils Kroemer¹, Juliane Helbig¹, Franziska Wuttig¹, Sabine Vollstädt-Klein², Michael Smolka¹
¹Technische Universität Dresden, Dresden, Germany, ²Central Institute of Mental Health, Mannheim, Germany
- 1935 A Single-Trial Estimation of the Feedback-Related Negativity and its Relation to BOLD Responses**
Michael P.I. Becker¹, Wolfgang Miltner², Alexander Nitsch², Thomas Straube³
¹Institute of Medical Psychology and Systems Neuroscience, Muenster, Germany, ²Friedrich-Schiller-University, Jena, Germany, ³University of Muenster, Muenster, Germany
- 1936 Electrophysiological Correlates of Reward Processing in Sensation Seeking**
Ya Zheng¹, Xun Liu¹
¹Institute of Psychology, Chinese Academy of Sciences, Beijing, China
- 1937 Dopamine depletion leads to altered reward, homeostatic and prefrontal activity in lean and obese**
Sabine Frank¹, Theresa Unholzer¹, Ute-Maria Bauer¹, Andreas Fritsche^{2,3,4}, Hans-Christoph Friederich⁵, Paul Enck⁶, Helene Sauer⁶, Ralf Veit¹, Hubert Preissl^{1,3,4,7}
¹Institute for Medical Psychology and Behavioral Neurobiology, University of Tübingen, Tübingen, Germany, ²Department of Internal Medicine IV, University Hospital, Tübingen, Germany, ³Institute for Diabetes Research and Metabolic Diseases of the Helmholtz Center Munich at the University of Tübingen, Tübingen, Germany, ⁴German Center for Diabetes Research, Neuherberg, Germany, ⁵Centre for Psychosocial Medicine, University Hospital Heidelberg, Heidelberg, Germany, ⁶Department of Psychosomatic Medicine, University Hospital, Tübingen, Germany, ⁷fMEG Center, Tübingen, Germany
- 1938 Intertemporal Choice: Amount or Delay Discounting?**
Philipp Neukam¹, Nils Kroemer¹, Ying Lee¹, Michael Smolka¹
¹Technische Universität Dresden, Dresden, Germany
- 1939 Hormonal shifts during menstrual cycle alter frontal N200 induced by sexual dimorphic faces**
Melanie Ratnayake¹, Daniel Wiswede², Esther Diekhof¹
¹Biozentrum Grindel, Institut für Humanbiologie, University Hamburg, Hamburg, Germany, ²University Clinic Schleswig-Holstein, Lübeck, Germany
- 1940 Zero or nothing? Context-sensitivity of the FRN for zero-value feedback outcomes**
Daniela M. Pfabigan¹, Eva-Maria Seidel¹, Katharina Paul¹, Arvina Grahl¹, Uta Sailer², Rupert Lanzenberger³, Christian Windischberger⁴, Claus Lamm¹
¹Social, Cognitive and Affective Neuroscience Unit, Faculty of Psychology, University of Vienna, Vienna, Austria, ²Department of Psychology, Faculty of Social Sciences, University of Gothenburg, Gothenburg, Sweden, ³Medical University of Vienna, Vienna, Austria, ⁴MR Center, Medical University of Vienna, Vienna, Austria
- 1941 Performance monitoring during associative learning and its relation to obsessive-compulsive symptoms**
Nuria Doñamayor¹, Jakob Dinani¹, Manuel Römisch¹, Zheng Ye², Thomas Münte¹
¹Department of Neurology, Universität zu Lübeck, Lübeck, Germany, ²Donders Centre for Cognitive Neuroimaging, Nijmegen, Netherlands
- 1942 Oscillatory neuronal activity during reward processing: relationship to personality traits**
Gregor Leicht¹, Stefan Troschütz¹, Christina Andreou¹, Evangelos Karamatskos¹, Matthias Ertl¹, Dieter Naber², Christoph Mulert¹
¹Psychiatry Neuroimaging Branch, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ²Department of Psychiatry and Psychotherapy, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
- 1943 Effects of oxytocin on amygdala activation are moderated by features of individuals and situations**
Sarah Groppe¹, Anna Gossen¹, Lena Rademacher¹, Alexa Nellen¹, Luzie Westphal¹, Gerhard Gründer¹, Katja Spreckelmeyer²
¹RWTH Aachen University Department of Psychiatry, Psychotherapy and Psychosomatics, Aachen, Germany, ²Department of Psychology, Stanford University, United States

- 1944 Food attracts Attention: Disinhibited Eating Behavior modulates Attentional Networks**
Maike Hege^{1,2}, Krunoslav Stingl^{1,3}, Martin Heni⁴, Ralf Veit¹, Hubert Preissl^{1,5,6}
¹Institute for Medical Psychology and Behavioural Neurobiology, fMEG Center, University of Tuebingen, Tuebingen, Germany, ²Graduate School of Neural and Behavioural Sciences, International Max Planck Research School, University Tuebingen, Tuebingen, Germany, ³Department of Neonatology, University Children's Hospital of Tuebingen, Tuebingen, Germany, ⁴Department of Internal Medicine IV, University Hospital of Tuebingen, Tuebingen, Germany, ⁵German Center for Diabetes Research (DZD), Neuherberg, Germany, ⁶Institute for Diabetes Research and Metabolic Diseases of the Helmholtz Center Munich at the University of Tuebingen (IDM), Tuebingen, Germany
- 1945 Effect of Social Observation on Feedback-Related Activity in the Human Ventral Striatum**
Michael P.I. Becker¹, Doerte Simon², Martin Mothes-Lasch³, Thomas Straube³
¹Institute of Medical Psychology and Systems Neuroscience, Muenster, Germany, ²Institute of Medical Psychology and Systems Neuroscience, Muenster, Germany, ³University of Muenster, Muenster, Germany
- 1946 Impaired hypothalamic and prefrontal response to insulin in obese adults**
Stephanie Kullmann^{1,2,3}, Martin Heni⁴, Ralf Veit¹, Andreas Fritsche^{4,2,3}, Hans-Ulrich Häring^{4,2,3}, Hubert Preissl^{1,2,3}
¹Institute of Medical Psychology and Behavioral Neurobiology, University of Tübingen, Tübingen, Germany, ²Institute for Diabetes Research and Metabolic Diseases of the Helmholtz Center Munich at the University of Tübingen, Tübingen, Germany, ³German Center for Diabetes Research, Neuherberg, Germany, ⁴Department of Internal Medicine IV, University of Tübingen, Tübingen, Germany
- 1947 Reward Processing in Soccer Players upon Scoring and Winning Money: An fMRI Study on Egoism Effects**
Alexander Häusler¹, Bernd Weber²
¹Center for Economics and Neuroscience (CENs), Bonn, Germany, ²Department of NeuroCognition Imaging, Life & Brain Center, University of Bonn, Bonn, Germany
- 1948 Reward vs Motivation: Striatal Responses to Reward Cues Presented after a Target**
Scott Tillem¹, Lauren Pepe², Daniel R Weinberger¹, Caroline Zink¹
¹Lieber Institute for Brain Development, Baltimore, United States, ²National Institute of Mental Health, Bethesda, United States
- 1949 Individual differences in avoidance learning correlates with dopamine-dependent cognitive function**
Vani Pariyadath¹, Moxi Zhou¹, Thomas Ross², Elliot Stein³
¹National Institute on Drug Abuse, National Institutes of Health, Baltimore, United States, ²NIDA/NIH, Baltimore, MD, ³NIDA/NIH, Baltimore, MD
- 1950 Cocaine use modulates neurobehavioral substrates of loss aversion in a probabilistic learning task**
John Wang^{1,2,3}, Lusha Zhu^{1,3}, Richard De La Garza^{4,5}, Thomas Newton^{4,5}, Katherine McCurry^{1,3,2}, Brooks King-Casas^{1,3,6,2,7}, Pearl Chiu^{1,3,2,7}
¹Virginia Tech Carilion Research Institute, Roanoke, VA, ²Virginia Tech Department of Psychology, Blacksburg, VA, ³Salem VA Medical Center, Salem, VA, ⁴Baylor College of Medicine, Menninger Department of Psychiatry and Behavioral Sciences, Houston, TX, ⁵Michael E. DeBakey VA Medical Center, Houston, TX, ⁶Virginia Tech School of Biomedical Engineering and Science, Blacksburg, VA, ⁷Virginia Tech Carilion School of Medicine, Roanoke, VA
- 1951 Neural activation in high level associative learning with monetary reward**
Hsiang-Yun Chien¹, Chia-Wei Li¹, Jyh-Horng Chen^{1,2}, Keng-Chen Liang^{2,3}
¹Interdisciplinary MRI/MRS Lab, Department of Electrical Engineering, National Taiwan University, Taipei, Taiwan, ²Neurobiology and Cognitive Science Research Center, National Taiwan University, Taipei, Taiwan, ³Department of Psychology, National Taiwan University, Taipei, Taiwan
- 1953 Neural and behavioural correlates of Pavlovian conditioning and extinction learning**
Claudia Gählsdorf^{1,2}, Eva Friedel¹, Iloray Crespo¹, Lorenz Deserno^{1,2}, Andreas Ströhle¹, Andreas Heinz^{1,3}, Stefan Koch¹, Schlagenhauf Florian^{1,2}
¹Department of Psychiatry and Psychotherapy, Charité — Universitätsmedizin Berlin, Berlin, Germany, ²Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ³Cluster of Excellence NeuroCure, Charité-Universitätsmedizin Berlin, Berlin, Germany
- 1954 Reward and effort learning — an FMRI study**
Jacqueline Scholl¹, Nils Kolling¹, Natalie Nelissen¹, Catherine Harmer¹, Matthew Rushworth¹
¹University of Oxford, Oxford, United Kingdom
- 1955 The good and the bad and the brain's response to anticipating ambivalent future events**
Johann Kruschwitz^{1,2}, David List^{1,2}, Stefanie Beck², Uta Wolfensteller², Thomas Goschke², Henrik Walter¹
¹Charité Universitätsmedizin, Berlin, Germany, ²Technische Universität Dresden, Dresden, Germany

- 1956 The anticipation of aversive shocks modulates early event-related fields and oscillatory beta power**
Eva Bauch¹, Nico Bunzeck^{1,2}
¹Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ²Department of Psychology, University of Lübeck, Lübeck, Germany
- 1957 An fMRI study to clarify the nature of human's play**
Naoki Miura¹, Hiroki Tanabe², Akihiro Sasaki³, Tokiko Harada⁴, Norihiro Sadato⁴
¹Tohoku Institute of Technology, Sendai, Japan, ²Nagoya University, Nagoya, Aichi, ³Pathophysiological and Health Science Team RIKEN Center for Life Science Technologies, Kobe, Japan, ⁴National Institute for Physiological Sciences, Okazaki, Japan

SEXUAL BEHAVIOR

- 1958 Neural Correlates of Positive Affect Induced by Repeated Exposure**
RUEI-JYUN HUNG¹, Yong-Sheng Chen², Jen-Chuen Hsieh^{1,3}, Li-Fen Chen^{1,3}
¹Institute of Brain Science, National Yang-Ming University, Taipei, Taiwan, ²Department of Computer Science, National Chiao Tung University, Hsinchu, Taiwan, ³Integrated Brain Research Unit, Division of Clinical Research, Department of Medical Research, Taipei, Taiwan
- 1959 The effects of methylphenidate (Ritalin®) on feedback-related BOLD signals in healthy volunteers**
Elisabeth AT Evers¹, P Stiers¹, J Ramaekers¹
¹Maastricht University, Maastricht, Netherlands
- 1960 Neuronal mechanisms of error monitoring in motivational context in healthy children and adolescents**
Vera Moliadze¹, Ekaterina Lyzhko^{1,2}, Lena Böcher¹, Christine Freitag¹, Michael Siniatchkin¹
¹Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy, Goethe-University of Frankfurt, Frankfurt am Main, Germany, ²Institute of Mathematical Problems of Biology Russia, Pushchino, Moscow Region, Russian Federation
- 1961 Reinforcement learning in patients with major depressive disorder**
Jonas Tonn¹, Stephan Köhler¹, Marcus Rothkirch¹, Philipp Sterzer²
¹Charité Universitätsmedizin Berlin, Berlin, Germany, ²Charité Universitätsmedizin Berlin, Berlin, GA

- 1962 Interaction between COMT Val158Met polymorphism and childhood adversity affects reward processing**
Regina Boecker¹, Nathalie Holz¹, Arlette Buchmann¹, Dorothea Blomeyer¹, Michael Plichta², Isabella Wolf^{1,3}, Sarah Baumeister¹, Jens Treutlein⁴, Marcella Rietschel⁴, Andreas Meyer-Lindenberg², Tobias Banaschewski¹, Daniel Brandeis^{1,5,6,7}, Manfred Laucht^{1,8}
¹Department of Child and Adolescent Psychiatry and Psychotherapy, CIMH Medical Faculty Mannheim/Heidelberg University, ²Department of Psychiatry and Psychotherapy, CIMH Medical Faculty Mannheim/Heidelberg University, ³Department of Neuroimaging, CIMH Medical Faculty Mannheim/Heidelberg University, ⁴Department of Genetic Epidemiology in Psychiatry, CIMH Medical Faculty Mannheim/Heidelberg University, ⁵Department of Child and Adolescent Psychiatry, University of Zurich, ⁶Center for Integrative Human Physiology, University of Zurich, ⁷Neuroscience Center Zurich, University of Zurich and ETH Zurich, ⁸Department of Psychology, University of Potsdam
- 1963 Feedback's informative value as the driving force of the feedback-related negativity (FRN)**
Bertram Opitz¹, Kathrin Eschmann²
¹University of Surrey, Guildford, United Kingdom, ²Saarland University, Saarbrücken, Germany
- 1964 The role of prediction errors for the sustained neural representation of motivational values**
Marcus Rothkirch^{1,2}, Jonas Tonn^{1,2}, Stephan Köhler^{1,2}, Philipp Sterzer^{1,2,3}
¹Department of Psychiatry, Charité — Universitätsmedizin Berlin, Berlin, Germany, ²Berlin Center for Advanced Neuroimaging (BCAN), Berlin, Germany, ³Bernstein Center for Computational Neuroscience, Berlin, Germany
- 1965 Striatal dopamine synthesis capacity modulates action representation in the mesolimbic midbrain**
Yu Fukuda¹, Jakob Kaminski¹, Lorenz Deserno², Stefan Koch³, Ralph Buchert⁴, Florian Schlagenhauf²
¹Department of Psychiatry and Psychotherapy, Campus Charité Mitte, Charité-Universitätsmedizin, Berlin, Germany, ²Charité Universitätsmedizin Berlin, Berlin, Germany, ³Berlin Neuroimaging Center, Charité University Hospital, Berlin, Germany, ⁴Charité Universitätsmedizin, Department of Nuclear Medicine, Berlin, Germany

- 1966 Adiposity Modulates Anticipatory and Consummatory Dorsal Mid-Insula Responses to Food Stimuli**
John Ingeholm¹, Kevin Hall², Bernard Miller², Kaiping Burrows³, Alex Martin¹, W. Kyle Simmons^{3,4}
¹National Institute of Mental Health, Bethesda, United States, ²National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, United States, ³Laureate Institute for Brain Research, Tulsa, United States, ⁴University of Tulsa, Tulsa, United States
- 1967 The Latent Factor Structure of Biological & Behavioral Markers of Reward Sensitivity in Adolescence**
Colin Sauder^{1,2}, Alexandria Meyer², Anna Weinberg², Joseph Blader¹, Donald Robin¹, Greg Hajcak Proudfit²
¹University of Texas Health Science Center, San Antonio, San Antonio, TX, ²Stony Brook University, Stony Brook, NY
- 1968 Dynamics in human visual cortex reflects local reward history**
Filip Gesiarz¹, Niels Kloosterman¹, Tomas Knapen², Michael Cohen¹, Tobias Donner¹
¹University of Amsterdam, Amsterdam, Netherlands, ²VU University, Amsterdam, Netherlands
- 1969 Sex differences in relationships between brain volume and risk behaviors in adolescents**
Christina Chen¹, Megan Herting², Elizabeth Sowell¹
¹University of Southern California, Los Angeles, United States, ²Children's Hospital, Los Angeles, United States
- 1970 Neural correlates of sexual functioning modulated by reboxetine and amisulpride in healthy volunteer**
Heiko Graf¹, Maike Wieggers², Coraline Metzger³, Martin Walter³, Georg Grön⁴, Birgit Abler⁵
¹Ulm University, Germany, ²Ulm University, Department of Psychiatry, Ulm, Germany, ³Department of Psychiatry and Psychotherapy, Otto-von-Guericke University, Magdeburg, Germany, ⁴Ulm University, Ulm, Germany, ⁵University of Ulm, Ulm, Germany
- 1971 Altered cortical neuroanatomy and structural network topology in psychogenic erectile dysfunction**
Lu Zhao¹, Min Guan², Dapeng Shi², Budhachandra Khundrakpam¹, Minghao Dong³, Wei Qin⁴, Jie Tian⁵, Alan Evans¹
¹Montreal Neurological Institute, McGill University, Montreal, Canada, ²Henan Provincial People's Hospital, Zhengzhou, China, ³School of Life Sciences and Technology, Xidian University, Xi'an, China, ⁴School of Life Sciences and Technology, Xidian University, Xi'an, China, ⁵Institute of Automation, Chinese Academy of Sciences, Beijing, China
- 1972 Spontaneous Neural Activity changes in Psychogenic Erectile Dysfunction: Resting-State fMRI study**
Min Guan¹, Minghao Dong², Meiyun Wang¹, Wei Qin², Xiangsheng Zhang³, Dapeng Shi¹, Jie Tian⁴
¹Radiology, HeNan Provincial People's Hospital, Zhengzhou, China, ²School of Life Sciences and Technology, Xidian University, Xi'an, China, ³Urology, HeNan Provincial People's Hospital, Zhengzhou, China, ⁴Institute of Automation, Chinese Academy of Sciences, Beijing, China
- 1973 Neural responses towards sexual stimuli in subjects reporting sexual hyperactivity and controls**
Sina Wehrum-Osinsky¹, Tim Klucken¹, Sabine Kagerer¹, Bertram Walter¹, Rudolf Stark²
¹Justus-Liebig-University, Giessen, Germany, ²Justus Liebig University, Giessen, Germany
- 1974 Are there Theory of Mind deficits in Pedophilia? A neural and behavioral investigation**
Miriam Schuler¹, Sebastian Mohnke², Till Amelung³, Michael Scheel⁴, Klaus Beier³, Henrik Walter⁵
¹Clinic for Psychiatry and Psychotherapy Charité — Universitätsmedizin Berlin, Berlin, Germany, ²Charité Universitätsmedizin Berlin, Berlin, Germany, ³Institute for Sexology and Sexual Medicine Charité — Universitätsmedizin Berlin, Berlin, Germany, ⁴Department of Neuroradiology Charité — Universitätsmedizin Berlin, Berlin, Germany, ⁵Charité Universitätsmedizin, Berlin, Germany
- 1975 The neural response to sexual stimuli in women and the 'uni-sex' brain network: a meta-analysis**
Timm Poepl¹, Danilo Bzdok², Berthold Langguth¹, Simon Eickhoff³
¹University of Regensburg, Regensburg, Germany, ²N/A., Germany, ³Institute of Clinical Neuroscience and Medical Psychology, Heinrich Heine University, Duesseldorf, Germany
- 1976 Size matters: The problem of sex differences in regional cortical thickness**
Jared Pool¹, Chris Gorgolewski², Judy Kipping³, Sebastian Urchs⁴, Daniel Margulies¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²MPI for Human Cognitive and Brain Sciences, Leipzig, Germany, ³Max-Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, Leipzig, Germany, ⁴MNI, Montreal, Canada

Imaging Methods

ANATOMICAL MRI

- 1977 Brain integrity assessment: a multimodal approach based on T1- and T2-weighted MR imaging data**
Marco Ganzetti^{1,2}, Nicole Wenderoth^{1,3}, Dante Mantini^{1,2}
¹ETH Zurich, Zurich, Switzerland, ²University of Oxford, Oxford, United Kingdom, ³KU Leuven, Leuven, Belgium
- 1978 The gray-white contrast in spin-echo imaging at 7 T**
Robert Trampel¹, Jochen Schmidt¹, Laurentius Huber¹, Andreas Schaefer¹, Robert Turner¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 1979 Anatomical correlation of procrastination**
Yuka Kotozaki¹, Kunio Iizuka¹, Rui Nouchi¹, Hikaru Takeuchi², Yasuyuki Taki³, Atsushi Sekiguchi⁴, Seishu Nakagawa³, Carlos Makoto Miyauchi⁵, Ryoichi Yokoyama¹, Takamitsu Shinada³, Yuki Yamamoto³, Sugiko Hanawa⁴, Tsuyoshi Araki⁵, Hiroshi Hashizume⁶, Keiko Kunitoki⁷, Yuko Sassa⁶, Ryuta Kawashima¹
¹Tohoku University, Sendai, Japan, ²IDAC Tohoku University, Miyagi Sendai city, Japan, ³IDAC, Tohoku University, Sendai, Japan, ⁴Tohoku University, Sendai, Japan, ⁵Institute of Development, Aging and Cancer(IDAC), Tohoku University, Sendai, Japan, ⁶Institute of Development, Aging and Cancer, Tohoku University, Sendai, Miyagi, ⁷Faculty of Medicine, Tohoku University, Sendai, Japan
- 1980 Reproducibility of Segmentation Measures from High-Resolution 3T MRI Acquired with PROMO**
Joelle Sarlls¹, Francois Lalonde², Dan Rettmann³, Ajit Shankaranarayanan⁴, S. Lalith Talagala¹, Vinai Roopchansingh²
¹NINDS/National Institutes of Health, Bethesda, United States, ²NIMH/National Institutes of Health, Bethesda, United States, ³GE Healthcare, Rochester, United States, ⁴GE Healthcare, Menlo Park, United States
- 1981 Fetal testosterone is associated with sex differences in white matter volume in children**
Amber Ruigrok¹, Emma Chapman², Meng-Chuan Lai^{1,3}, Michael Lombardo^{1,4}, Bonnie Auyeung^{1,5}, John Suckling^{6,7,8}, Kevin Taylor⁹, Gerald Hackett¹⁰, Edward Bullmore^{6,7}, Simon Baron-Cohen^{1,8}
¹Autism Research Centre, Department of Psychiatry, University of Cambridge, Cambridge, United Kingdom, ²Department of Psychology, University of Bath, Bath, United Kingdom, ³Department of Psychiatry, College of Medicine, National Taiwan University, Taipei, Taiwan, ⁴Department of Psychology, University of Cyprus, Nicosia, Cyprus, ⁵Department of Psychology, University of Edinburgh, Edinburgh, United Kingdom, ⁶Brain Mapping Unit, Department of Psychiatry, University of Cambridge, Cambridge, United Kingdom, ⁷Behavioural and Clinical Neuroscience Institute, Department of Psychology, University of Cambridge, Cambridge, United Kingdom, ⁸Cambridgeshire and Peterborough NHS Foundation Trust, Cambridge, United Kingdom, ⁹Department of Clinical Biochemistry, Addenbrooke's Hospital, Cambridge, United Kingdom, ¹⁰Department of Fetal Medicine, Rosie Maternity Hospital, Cambridge, United Kingdom
- 1982 Improved susceptibility weighted imaging using adaptive reconstruction of multi-channel images**
Ya-jun Ma¹, Wentao Liu², Yang Fan³, Huanjie Li¹, Jia-Hong Gao⁴
¹Peking University, Beijing, China, ²Beijing City Key Lab for Medical Physics and Engineering, School of Physics, Peking University, Beijing, China, ³PKU, Beijing, China, ⁴MRI Research Center and Beijing City Key Lab for Medical Physics and Engineering, Peking University, Beijing, China
- 1983 Does Human Brain Cortical Thickness Measured with MRI Depend on the Magnetic Field Strength?**
ponnada narayana¹, Koushik Govindarajan², Leorah Freeman³, Chunyan Cai², Mohammad Rahbar²
¹University of Texas Health Science Center at Houston, Houston, TX, ²UTHealth at Houston, Houston, United States, ³UTHealth at Houston, Houston, TX
- 1984 Brain structure, neuroticism, negative automatic thoughts and depression in healthy undergraduates**
Xue Du¹, Qinglin Zhang², Jiang Qiu²
¹Department of psychology, Southwest University, ChongQing, China, ²Department of psychology, Southwest University, ChongQing, China

- 1985 Assessing the human brain at ultra-high fields — Comparing 7T and 3T MRI voxel-based morphometry**
Rene Seiger¹, Andreas Hahn¹, Martin Küblböck², Ronald Sladky², Sebastian Ganger¹, Georg Kranz¹, Dietmar Winkler¹, Siegfried Kasper¹, Christian Windischberger², Rupert Lanzenberger¹
¹Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria, ²Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Austria
- 1986 Using cohort-specific templates significantly improves normalisation in Multiple Sclerosis**
Nils Muhlert¹, Dan Tozer², Varun Sethi², Marc Modat³, Sebastian Ourselin³, David Miller², Maria Ron², Claudia Wheeler-Kingshott², Declan Chard²
¹Cardiff University, Cardiff, United Kingdom, ²UCL Institute of Neurology, London, United Kingdom, ³UCL, London, United Kingdom
- 1987 Reduced globus pallidus volumes following focal cerebellar lesions in humans**
Torgeir Moberget¹, Andreea Bostan², Trygve Lundar³, Bernt Due-Tønnessen³, Heldal Aasta⁴, Stein Andersson^{1,4}, Tor Endestad^{1,4}, Lars Westlye^{5,1}
¹Department of Psychology, University of Oslo, Oslo, Norway, ²Systems Neuroscience Institute and Department of Neurobiology, University of Pittsburgh, Pittsburgh, PA, ³Department of Neurosurgery, Oslo University Hospital, Oslo, Norway, ⁴Department of Psychosomatic Medicine, Oslo University Hospital, Oslo, Norway, ⁵KG Jebsen Center for Psychosis Research, Oslo, Norway
- 1988 Head Motion in MRI Causes Bias in Structural Brain Measurements**
Martin Reuter^{1,2}, M. Dylan Tisdall¹, André Van der Kouwe¹, Bruce Fischl^{1,2}
¹A.A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Harvard Medical School, Charlestown, MA, ²Massachusetts Institute of Technology, Cambridge, MA
- 1989 Cortical Thickness/Volume Measured with Variable Acceleration in Young and Elderly Populations**
Ross Mair^{1,2}, Martin Reuter^{2,3}, André Van der Kouwe²
¹Harvard University — Center for Brain Science, Cambridge, United States, ²Athinoula A. Martinos Center for Biomedical Imaging, Harvard Medical School, Mass. General Hospital, Charlestown, United States, ³Department of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, United States
- 1990 An Automatic Framework for Quantitative Validation of VBM Measures of Anatomical Brain Asymmetry**
Antonietta Pepe¹, Ivo Dinov², Jussi Tohka¹
¹Tampere University of Technology, Tampere, Finland, ²Laboratory of Neuro Imaging (LONI), Keck School of Medicine, University of Southern California, Los Angeles, CA
- 1991 Enhanced T1-weighted myelin contrast across lamina at 7T, ex vivo histology and high resolution MRI**
Alessio Fracasso¹, Susanne J. van Veluw², Serge O. Dumoulin¹, Jaco J.M. Zwanenburg³, Natalia Petridou³
¹Experimental Psychology, Helmholtz Institute, Utrecht University, Utrecht, Netherlands, ²Department of Neurology, Brain Center Rudolf Magnus, University Medical Center Utrecht, Utrecht, Netherlands, ³Department of Radiology/Image Sciences Institute, University Medical Center Utrecht, Utrecht, Netherlands
- 1992 Intensity normalization for intensity-based segmentation of brain structures on 7T MR images**
Stephanie Schindler¹, Pierre-Louis Bazin², Jan Schreiber², Ulrich Hegerl¹, Robert Turner², Stefan Geyer², Peter Schönknecht¹
¹Department of Mental Health, Clinic for Psychiatry and Psychotherapy, University Hospital Leipzig, Leipzig, Germany, ²Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 1993 Alterations of Brain Volumes correlated with Body Mass Index in Early Onset Anorexia Nervosa**
anne bargiacchi¹, Roberto Toro², BEGGIATO ANITA³, Julia Clarke¹, Muriel Asch¹, Alexandre Hubert¹, Anna Maruani¹, Alexandre Mathieu⁴, Pauline Houssinot¹, Marie-France Le Heuzey¹, Marie-Christine Mouren¹, Richard Delorme¹
¹Robert Debre Hospital, Paris, France, ²CNRS URA 2182 'Genes, synapses and cognition', Paris, France, ³PASTEUR INSTITUTE, PARIS, France, ⁴Institut Pasteur, Paris, France

- 1994 Orbitofrontal gray matter reductions in obese adolescents relative to normal weight participants**
Pilar González-Tartière¹, Idoia Marqués-Iturria^{1,2}, Isabel García-García^{1,2}, Maite Garolera^{3,4}, Roser Pueyo^{1,2,4}, Bárbara Segura^{1,4}, Olga Laporta-Hoyos¹, Maria Consuelo Sánchez-Garre⁵, Nuria Miró⁵, Teresa Font⁶, María Ángeles Jurado^{1,2,4}
¹Departament de Psiquiatria i Psicobiologia Clínica, Universitat de Barcelona, Barcelona, Spain, ²Institute for Brain, Cognition and Behaviour (IR3C), Barcelona, Spain, ³Unitat de Neuropsicologia, Hospital de Terrassa, Consorci Sanitari de Terrassa, Terrassa, Spain, ⁴Grup de Recerca Consolidat en Neuropsicologia (SGR0941), Barcelona, Spain, ⁵Unitat de Endocrinologia Pediàtrica. Servei de Pediatria. Consorci Sanitari de Terrassa, Terrassa, Spain
- 1995 Short term grey matter changes in patients with chronic low back pain following a pain paradigm**
Kerstin Luedtke¹, Rea Rodriguez-Raecke¹, Arne May¹
¹Institute of Systems Neurosciences, Hamburg, Germany
- 1996 Automated hippocampal segmentation in presurgical evaluation of patients with temporal lobe epilepsy**
Marcus Belke¹, Adam Strzelczyk¹, Sebastian Bauer¹, Katja Menzler¹, Felix Rosenow¹, Susanne Knake¹
¹Department of Neurology, Epilepsy Center Hessen, Philipps-University Marburg, Marburg, Germany
- 1997 The amygdalo-hippocampal border and its structural variability exposed by 3T and 7T in vivo MRI**
Johanna Derix¹, Falk Lüsebrink², Shan Yang³, Lukas Fiederer⁴, Andreas Schulze-Bonhage⁵, Ad Aertsen⁶, Oliver Speck³, Tonio Ball⁷
¹Epilepsy Center, University Medical Center, Albert-Ludwigs-University, Freiburg, Germany, ²University of Magdeburg, Department of Biomedical Magnetic Resonance, Magdeburg, Germany, ³Department of Biomedical Magnetic Resonance, Institute for Experimental Physics, Faculty of Natural, Magdeburg, Germany, ⁴Epilepsy Center University Hospital Freiburg, Freiburg, Germany, ⁵University Medical Center Freiburg, Freiburg, Germany, ⁶Bernstein Center, Freiburg, Germany, ⁷University Medical Center, Freiburg, Germany
- 1998 Ultra high-resolution 7T MRI of the human hippocampus: correlations with morphometry and convolution**
Sinead Brady¹, Adam Thomas², Andrea Dennis¹, Jill Betts¹, Nancy Rawlings³, Claire Sexton¹, Stuart Clare⁴, Mark Jenkinson¹, Heidi Johansen-Berg¹
¹University of Oxford, Oxford, United Kingdom, ²NIMH, Bethesda, MD, ³FMRI, University of Oxford, Oxford, United Kingdom, ⁴FMRI Centre, University of Oxford, Oxford, United Kingdom
- 1999 Mapping the memory circuit: segmentation of fornix, fimbria and alveus on high-resolution 3T MRI**
Robert Amaral¹, Min-Tae Park², Jens Pruessner³, Jon Pipitone^{2,4}, Julie Winterburn^{2,4}, Sofia Chavez^{5,6}, Mark Schira^{7,8}, Nancy Lobaugh^{9,10}, Aristotle Voineskos^{11,6}, Mallar Chakravarty^{2,4,6}
¹Kimel Family Translational Imaging-Genetics Laboratory, Center for Addiction and Mental Health, Toronto, Canada, ²Kimel Family Translational Imaging-Genetics Laboratory, Centre for Addiction and Mental Health, Toronto, Canada, ³McGill Centre for Studies in Aging, McGill University, Montréal, Canada, ⁴Institute of Biomaterials and Biomedical Engineering, University of Toronto, Toronto, Canada, ⁵MRI Unit, Research Imaging Centre, Centre for Addiction and Mental Health, Toronto, Canada, ⁶Department of Psychiatry, University of Toronto, Toronto, Canada, ⁷School of Psychology, University of Wollongong, Wollongong, Australia, ⁸Neuroscience Research Australia, Sydney, Australia, ⁹MRI Unit, Research Imaging Centre, Center for Addiction and Mental Health, Toronto, Ontario, ¹⁰Division of Neurology, Department of Medicine, University of Toronto, Toronto, Canada, ¹¹Kimel Family Translational Imaging-Genetics Laboratory, Center for Addiction and Mental Health, Toronto, Ontario
- 2000 IR-MRI based cortical layers of the visual cortex in birth-blind subjects**
Daniel Barazany^{1,2}, Shani Ben Amitay², Eyal Lotan³, Ella Striem-Amit⁴, Amir Amedi⁴, Yaniv Assaf²
¹CUBRIC, Cardiff University, Cardiff, United Kingdom, ²Tel Aviv University, Tel Aviv, Israel, ³Sheba Medical Center and Tel Aviv University, Tel Aviv, Israel, ⁴Hebrew University, Jerusalem, Israel
- 2001 Estimating Myelin Water Fraction in Spin Echo and Gradient Echo: a Monte-Carlo Simulation**
Joon Yul Choi¹, Jongho Lee²
¹Department of Radiology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, United States, ²Department of Radiology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, United States
- 2002 Fast Quantitative T1 Mapping With Simultaneous Multi-Slice EPI**
Robert Dougherty¹, Aviv Mezer¹, Kangrong Zhu¹, Adam Kerr¹, Matthew Miodone²
¹Stanford University, Stanford, CA, ²Applied Science Laboratory, GE Healthcare, Menlo Park, CA
- 2003 Real-time motion correction for macromolecular mapping of human brain**
Ovidiu Andronesi¹, Dylan Tisdall², J.W. van der Kouwe Andre³
¹Harvard Medical School, Boston, United States, ²Harvard Medical School, Boston, MA, ³Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, United States

- 2004 Relationships between cortical structure, cognition and classroom-based stress**
Suzanne Houston¹, Elizabeth Sowell²
¹University of Southern California/CHLA, Los Angeles, United States, ²University of Southern California, Los Angeles, CA

BOLD FMRI

- 2005 Local spatial synchronization fMRI indicates functional specialization of putamen in motor imagery**
Henning Voss¹, Santosh Helekar², Nicholas Schiff¹
¹Weill Cornell Medical College, New York, NY, ²Houston Methodist Research Institute, Houston, TX
- 2006 BOLD Response of Repeated Median Nerve Stimulation While Controlling for Attention Effects**
Leo Ai¹, Jinhu Xiong²
¹University of Iowa, N/A, ²University of Iowa, Iowa City, IA
- 2007 Anxiety-induced brain responses in patients with phobic postural vertigo and healthy subjects**
Agnieszka Chrobok^{1,2}, Anna Länger^{1,2}, Susanne Karch¹, Daniel Keeser^{1,3}, Kerstin Lehmann^{1,2}, Wenzel Schicho^{1,2}, Gregor Leicht⁴, Christoph Mulert⁴, Daniela Eser-Valeri¹, Birgit Ertl-Wagner^{3,2}, Marianne Dieterich⁵, Rainer Rupprecht⁶, Oliver Pogarell^{1,2}
¹Department of Psychiatry and Psychotherapy, Ludwig-Maximilians University, Munich, Germany, ²German Center for Vertigo and Balance Disorders (IFB) LMU, Munich, Germany, ³Institute of Clinical Radiology, LMU, Munich, Germany, ⁴Department of Psychiatry, Hamburg, Germany, ⁵Department of Neurology, Ludwig-Maximilians University, Munich, Germany, ⁶University of Regensburg, Department of Psychiatry, Regensburg, Germany
- 2008 Cortico-subcortical Neural Correlates of Motor Response Inhibition: An fMRI Study at 7Tesla**
TURKI ABUALAIT^{1,2}, Susan Francis³, Stephen Jackson¹
¹University of Nottingham, Nottingham, United Kingdom, ²University of Dammam, Dammam, Saudi Arabia, ³Sir Peter Mansfield Magnetic Resonance Centre, School of Physics, University of Nottingham, Nottingham, United Kingdom

- 2009 Improving the spatial resolution of magnetic resonance inverse imaging using gradient blips**
Wei-Tang Chang¹, Kawin Setsompop¹, Jyrki Ahveninen¹, John Belliveau², Thomas Witzel¹, Fa-Hsuan Lin³
¹Martinos Center, Massachusetts General Hospital, Charlestown, MA, United States, ²Harvard Medical School — Athinoula A. Martinos Center for Biomedical Imaging, Cambridge, MA, United States, ³National Taiwan University, Taipei, Taiwan- Republic Of China
- 2010 Real-time fMRI neurofeedback training improves amygdala regulation during emotional stimulation**
Annette Bruhl^{1,2}, Sigrid Scherpie², Steffi Weidt³, Antonia Scheiblich², Philipp Stämpfli⁴, James Sulzer⁵, Michael Rufer³, Erich Seifritz², Uwe Herwig²
¹University of Cambridge, Behavioural and Clinical Neuroscience Institute, Cambridge, United Kingdom, ²Department of Psychiatry, Psychotherapy and Psychosomatics, University Hospital of Psychiatry Zurich, Zurich, Switzerland, ³Department of Psychiatry and Psychotherapy, University Hospital Zurich, Zurich, Switzerland, ⁴MR-Center of the Psychiatric University Hospital and the Department of Child and Adolescent Psychia, Zurich, Switzerland, ⁵Department of Mechanical Engineering, University of Texas at Austin, Austin, United States
- 2011 Difference of cortical activation during use of volar and dorsal hand splints: A fMRI study**
Woo Hyuk Jang¹, Sung Ho Jang²
¹Department of Physical Medicine & Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of, ²Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of
- 2012 The quest for the best: sensitivity of four 2D and 3D EPI sequences in mixed effects group analysis**
Evgeniya Kirilina¹, Antoine Lutti^{2,3}, Benedikt Poser^{4,5}, Arthur Jacobs¹, Felix Blankenburg¹, Nikolaus Weiskopf²
¹Free University Berlin, Berlin, Germany, ²Wellcome Trust Centre for Neuroimaging, Institute of Neurology, UCL, London, United Kingdom, ³Laboratoire de Recherche En Neuroimagerie, Department of Clinical Neurosciences, Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland, ⁴Maastricht Brain Imaging Center, Department of Cognitive Neuroscience, Maastricht University, Maastricht, Netherlands, ⁵Neuroscience and MR Research Program, Department of Medicine, University of Hawaii, Honolulu, HI

- 2013 Accelerating Resting State fMRI Acquisition using k-t FASTER: In Vivo Validation**
Mark Chiew¹, Stephen Smith¹, Nadine Graedel¹, Thomas Blumensath², Karla Miller¹
¹FMRIB, University of Oxford, Oxford, United Kingdom, ²ISVR, University of Southampton, Southampton, United Kingdom
- 2014 Enhanced efficiency in brain functional network associated with the complexity of cognitive state**
Xue Wen¹, Bishan Liang¹, Delong Zhang², Zengjian Wang¹, Ming Liu¹, Ruiwang Huang¹
¹Center for the Study of Applied Psychology, Key Laboratory of Mental Health and Cognitive Science of Guangdong Province, School of Psychology, South China Normal University, Guangzhou, China, ²Department of Radiology, Guangdong Province Hospital of Traditional Chinese Medicine, Guangzhou, China
- 2015 Dealing with noise in psychophysiological interaction analyses**
Marek Barton¹, Michal Miki¹, Radek Marecek¹
¹CEITEC, Masaryk University, Brno, Czech Republic
- 2016 Influence of cognitive stress and urbanicity on neural stress processing — an fMRI study**
Mohammad Al-Bayati¹, Bernd Kraemer¹, David Zilles¹, Jens Pruessner², Oliver Gruber³
¹Center for Translational Research in Systems Neuroscience and Psychiatry, Georg August University, Goettingen, Germany, ²McGill University, Montréal, Canada, ³Georg August University, Goettingen, Germany
- 2017 Optimisation of TR for BOLD sensitivity of accelerated functional imaging**
Sebastian Rieger^{1,2}, Swann Pichon³, Alexis Hervais-Adelman⁴, Patrik Vuilleumier^{5,2}
¹Swiss Center for Affective Sciences, University of Geneva, Geneva, Switzerland, ²Geneva Neuroscience Center, University of Geneva, Geneva, Switzerland, ³Faculty of Psychology and Educational Sciences, University of Geneva, Geneva, Switzerland, ⁴Brain and Language Lab, University of Geneva, Geneva, Switzerland, ⁵University Medical Center, University of Geneva, Geneva, Switzerland
- 2018 Physiological noise correction and repeatability of BOLD cerebrovascular reactivity measurement**
Erin Mazerolle¹, Yuhua Ma², Lirong Yan³, Danny JJ Wang³, Bruce Pike¹
¹University of Calgary, Calgary, Canada, ²McGill University, Montreal, Canada, ³Department of Neurology, UCLA, Los Angeles, United States
- 2019 Ultra-slow BOLD signal detection using multi-echo fMRI validated with simultaneous EEG**
Jennifer Evans¹, Prantik Kundu¹, Zhongming Liu², Silvina Horovitz³, Peter Bandettini¹
¹NIMH, NIH, Bethesda, MD, ²Purdue University, Lafayette, IN, ³NINDS, NIH, Bethesda, MD
- 2020 Exploring the topology of network convergence: integration and segregation in the human connectome**
Peter Bell¹, Mac Shine²
¹The University of Sydney, Sydney, NSW, ²The University of Sydney, Sydney, Australia
- 2021 Altered Granger information flow in the default mode network in adolescents with major depression**
Qing Jiao¹, Jun Ding², Weijia Gao³, Rongfeng Qi⁴, Yuan Zhong⁵, Qiang Xu⁴, Baoliang Sun⁶, Yongxin Guo¹, Fan Yang³, Linyan Su³, Guangming Lu⁴
¹Taishan Medical University, TAIAN, China, ²Mental Health Center of Shenzhen, Shenzhen Kangning Hospital, Shenzhen, China, ³Department of Child Psychiatry, Mental Health Institute, the Second Xiangya Hospital, Changsha, China, ⁴Department of Medical Imaging, Nanjing Jinling Hospital, Medical School of Nanjing University, Nanjing, China, ⁵School of Psychology, Nanjing Normal University, Nanjing, China, ⁶Key Lab of cerebral microcirculation in Universities of Shandong(Taishan Medical University), TAIAN, China
- 2022 Physiological Noise in High-Field fMRI: Disentangling Field from Brain**
Lars Kasper¹, S. Johanna Vannesjo², Saskia Klein², David Brunner², Simon Gross², Jakob Heinze¹, Klaas Enno Stephan^{1,3}, Klaas Pruessmann²
¹Translational Neuromodeling Unit, Inst. for Biomedical Engineering, Univ. of Zurich & ETH Zurich, Zurich, Switzerland, ²Institute for Biomedical Engineering, Univ. of Zurich & ETH Zurich, Zurich, Switzerland, ³Wellcome Trust Centre for Neuroimaging, Institute of Neurology, University College London, London, United Kingdom
- 2023 Frequency-specific Changes of Amplitude of Fluctuation during Finger-force Real-time Feedback**
Juejing Ren^{1,2}, Yu-Feng Zang^{1,3}
¹Center for Cognition and Brain Disorders, Hangzhou Normal University, Hangzhou, China, ²Zhejiang Key Laboratory for Research in Assessment of Cognitive Impairments, Hangzhou, China, ³Zhejiang Key Laboratory for Research in Assessment of Cognitive Impairments, Hangzhou, Zhejiang, China

- 2024 Allocentric vs. Egocentric Representation of Remembered Reach Targets in Human Cortex**
Ying Chen^{1,2}, Simona Monaco¹, Patrick Byrne¹, Denise Henriques¹, J. Douglas Crawford^{1,2}
¹York University, Toronto, Canada, ²Canadian Action and Perception Network (CAPnet), Toronto, Canada
- 2025 Comparison of 3D-GRASE and 2D Spin-Echo EPI for Sub-Millimeter-Resolution fMRI at 7 T**
Valentin Kemper¹, Federico De Martino¹, An Vu², Benedikt Poser¹, David Feinberg³, Rainer Goebel¹, Essa Yacoub²
¹Maastricht University, Maastricht, Netherlands, ²University of Minnesota, Minneapolis, MN, ³Advanced MRI Technologies, Sebastopol, CA
- 2026 Watching cerebral blood flow using BOLD fMRI**
Yunjie Tong¹, Blaise Frederick²
¹McLean Hospital, Harvard University, Belmont, United States, ²McLean Hospital, Harvard Medical School, Belmont, MA
- 2027 Real-Time TR-by-TR Simultaneous Correction for B0 Distortion and Rigid Body Motion during fMRI**
A. Alhamud¹, J.W. van der Kouwe Andre², Ernesta M. Meintjes¹
¹MRC/UCT Medical Imaging Research Unit, Department of Human Biology, University of Cape Town, Cape Town, South Africa, ²Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, United States
- 2028 Ultra-high field fMRI of pain-related brainstem nuclei in single subjects**
Florian Beissner^{1,2}, Jonathan Polimeni², Jieun Kim², Ville Renvall², Gaelle Desbordes², Lawrence Wald², Vitaly Napadow²
¹Somatosensory and Autonomic Therapy Research, Department of Neuroradiology, Hannover Medical School, Hannover, Germany, ²Athinoula A. Martinos Center for Biomedical Imaging, Department of Radiology, Harvard Medical School, Charlestown, MA
- 2029 What you see is what you eat: An ALE meta-analysis of neural correlates of food viewing in children**
Floor van Meer¹, Laura Van Der Laan¹, Roger Adan¹, Max Viergever¹, Paul Smeets¹
¹University Medical Center Utrecht, Utrecht, Netherlands
- 2030 Default mode network connectivity in patients with chronic cluster headache**
Anna Nigri^{1,2}, Stefania Ferraro¹, Luisa Chiapparini¹, Gennaro Bussone³, Maria Bruzzone¹, Paola Di Fiore³, Alberto Proietti Cecchini³, Massimo Leone³
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- 2031 Real-time Image Preprocessing and Physiological Noise Correction for fMRI**
Nafise Barzagar^{1,2}, Masaya Misaki¹, Vadim Zotev¹, Han Yuan¹, Raquel Phillips¹, Samuel Cheng², Jerzy Bodurka^{1,3}
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- 2032 Enhanced disease biomarkers through multi network Functional normalization in fMRI**
Mustafa Sinan Cetin¹, Siddharth Khullar², Andrew Michael³, Stefi Baum⁴, Vince Calhoun⁵
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- 2033 Resolving non-neuronal contribution in BOLD fMRI using concurrent EEG and multi-echo EPI data**
Han Yuan¹, Callen Johnson¹, Raquel Phillips¹, Vadim Zotev¹, Masaya Misaki¹, Jerzy Bodurka^{1,2}
¹Laureate Institute for Brain Research, Tulsa, OK, United States, ²University of Oklahoma, Norman, OK, United States
- 2034 Varied amplitude of low-frequency fluctuation in Nasopharyngeal carcinoma patients after radiotherapy**
Qianqian Sun¹, Weidong Zhang², Junjing Wang¹, Youming Zhang², Huang Huang¹, Shumei Li³, Jinghua Pan¹, Ming Liu¹, Li Li², Ruiwang Huang¹
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- 2035 Lateral Occipital Complex related functional connectivity in whole brain**
Bingqing Jiao¹, Delong Zhang², Bishan Liang¹, Huang Huang¹, Fangfang He¹, Liqing Liu¹, Qing Ma¹, Song Chang¹, Ruiwang Huang¹, Ming Liu¹
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- 2036 Effects of prolonged fasting on working memory-related brain network: an fMRI study**
Natalya Chechko¹, Berthold-Losleben Marc², Sebastian Vocke¹, Ute Habel³, Timur Toygar⁴, Stelios Orfanos¹, Wolfram Kargese⁵, Frank Schneider⁶, Nils Kohn⁷
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- 2037 Sequential evolution of cortical activity and effective connectivity of swallowing using fMRI**
Glad Mihai¹, Mareile Otto², Thomas Platz³, Simon Eickhoff^{4,5}, martin lotze¹
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- 2038 BOLD signal changes associated with interictal discharges examined with iEEG-fMRI**
Craig Beers¹, Ismael Gaxiola², Daniel Pittman², Anita Kang¹, Yahya Agha-Khani¹, Paolo Federico²
¹University of Calgary, Calgary, Canada, ²University of Calgary, Calgary, Alberta
- 2039 Effect of global signal modulation on relationship between positive and negative BOLD responses**
Stephen Mayhew¹, Karen Julia Mullinger², Andrew Bagshaw¹, Richard Bowtell², Susan Francis²
¹University of Birmingham, Birmingham, United Kingdom, ²Sir Peter Mansfield Magnetic Resonance Centre, School of Physics, University of Nottingham, Nottingham, United Kingdom
- 2040 The Spectral Diversity of Resting-State Fluctuations in the Human Brain**
Klaudius Kalcher¹, Roland Boubela², Wolfgang Huf³, Lucie Bartova⁴, Claudia Kronnerwetter⁵, Birgit Derntl⁶, Lukas Pezawas⁷, Peter Filzmoser⁸, Christian Naele⁹, Ewald Moser¹
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- 2041 Functional interaction of lateral occipital complex for visual stimuli**
Jinghua Pan¹, Delong Zhang², Bishan Liang¹, Huang Huang¹, Qianqian Sun¹, Song Chang¹, Ming Liu¹, Ruiwang Huang¹
¹Center for the Study of Applied Psychology, Key Laboratory of Mental Health and Cognitive Science of Guangdong Province, School of Psychology, South China Normal University, Guangzhou, China, ²Department of Radiology, Guangdong Province Hospital of Traditional Chinese Medicine, Guangzhou, China
- 2042 Primary Visual Cortex Associated Resting State Functional Connectivity in Creative Individuals**
Song Chang¹, Aiyong Liang^{1,2}, Delong Zhang³, Bishan Liang¹, Junjing Wang¹, Bingqing Jiao¹, Qianqian Sun¹, Ruiwang Huang¹, Ming Liu¹
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- 2043 Neural bases of planning functional grasps in left-handers: an fMRI study**
Lukasz Przybylski¹, Szymon Bidula¹, Mikolaj Pawlak^{2,1}, Gregory Krolczak¹
¹Action and Cognition Laboratory, Institute of Psychology, Adam Mickiewicz University in Poznan, Poznan, Poland, ²Department of Neurology and Cerebrovascular Disorders, Poznan University of Medical Sciences, Poznan, Poland

- 2044 FreeSurfer Assessment and Extension: Mapping of Fingertip Somatotopy using a Standardized Procedure**
Jörg Pfannmöller¹, Markus Oelschläger¹, Sebastian Strauss¹, Renate Schweizer², Martin Lotze³
¹University Medicine Greifswald, Greifswald, Germany, ²Biomedical Research Ltd at Max-Planck-Institute for Biophysical Chemistry, Göttingen, Germany, ³University of Greifswald, Greifswald, Germany
- 2045 A study of BOLD reproducibility: visual encoding, memory and resting state**
Pablo Martín Trias¹, Roser Sala-Llloch¹, Didac Vidal-Piñeiro¹, Catherine Cassé-Perrot², Laura Lanteaume³, Fabrizio Vecchio⁴, Nicola Marzano⁴, Claudio Babiloni⁴, Cleofé Peña-Gómez¹, Eider Arenaza-Urquijo¹, Núria Bargalló⁵, Jorge Jovicich⁶, Olivier Blin³, Joelle Micallef³, David Bartrés-Faz¹
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- 2046 In Vena Veritas: Why most Amygdala Activations Reported in fMRI are Artifacts**
Roland Boubela¹, Klaudius Kalcher², Wolfgang Huf¹, Eva-Maria Seidel³, Christian Nasel⁴, Ewald Moser²
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- 2047 Reduced neural connectivity during an n-back task in unmedicated Parkinson patients**
Niels Gerrits¹, James Trujillo¹, Dick Veltman¹, Henk Berendse¹, Ysbrand Van Der Werf¹, Odile van den Heuvel¹
¹VU University Medical Center, Amsterdam, Netherlands
- 2048 Degree centrality of the brain functional networks related to creativity in brain**
Bishan Liang¹, Aiyang Liang^{1,2}, Zhang Delong³, Song Chang¹, Qianqian Sun¹, Jinghua Pan¹, Ruiwang Huang¹, Ming Liu¹
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- 2049 Effect of scanner noise on brain networks: an auditory stimulation fMRI study**
Eun Kyoung Kang¹, Tae-Su Kim², Natalia Yakunina³, Woo-Suk Tae³, Ji-Hoon Min⁴, Sam Soo Kim^{5,3}, Eui-Cheol Nam^{6,3}
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- 2050 Progesterone mediates brain functional connectivity changes during the menstrual cycle**
Claudia Barth¹, Katrin Arélin¹, Karsten Mueller¹, Paraskevi (Vivien) Rekkas², Inga Burmann¹, Juergen Kratzsch³, Arno Villringer¹, Julia Sacher¹
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- 2051 Boosting BOLD sensitivity in frontal and temporal regions using T2-prepared BOLD fMRI at 7T**
Jun Hua^{1,2}, James Pekar^{1,2}, Peter van Zijl^{1,2}, Qin Qin^{1,2}, Craig Jones^{1,2}, Jeffrey Yau¹
¹Johns Hopkins, Baltimore, MD, United States, ²Kennedy Krieger Institute, Baltimore, MD, United States
- 2052 Self-Regulation of the Thalamus Activity Using Real-Time fMRI Neurofeedback**
Vadim Zotev¹, Kymberly Young¹, Raquel Phillips¹, Han Yuan¹, Masaya Misaki¹, Jerzy Bodurka^{1,2}
¹Laureate Institute for Brain Research, Tulsa, OK, ²College of Engineering, University of Oklahoma, Norman, OK

- 2053** **Adjusting mean activation for reaction time effects in BOLD fMRI**
Jeanette Mumford¹, Russell Poldrack²
¹University of Texas at Austin, Austin, United States, ²UT Austin, Austin, United States
- 2054** **700ms whole-brain coverage in task-evoked fMRI using simultaneous multi-slice/multiband acquisition**
Stephanie McMains¹, R. Matthew Hutchison¹, Ross Mair^{1,2}
¹Harvard University — Center for Brain Science, Cambridge, MA, ²Athinoula A. Martinos Center for Biomedical Imaging, Department of Radiology, Harvard Medical School, Massachusetts General Hospital, Charlestown, MA
- 2055** **Signal to noise implications of extremely short TR fMRI**
Blaise Frederick¹, Yunjie Tong²
¹McLean Hospital, Harvard Medical School, Belmont, MA, ²McLean Hospital, Harvard University, Belmont, United States
- 2056** **Does the Laplacian of Functional MRI Phase Data Allow a Direct Detection of Brain Activation?**
PINAR ÖZBAY^{1,2}, Cristina Rossi¹, Geoffrey Warnock³, Klaas Prüssmann², Daniel Nanz¹
¹Ins. for Diagn. and Interv. Radiology, University Hospital Zürich, Zürich, Switzerland, ²Institute for Biomedical Engineering, University and ETH Zurich, Zürich, Switzerland, ³Clinic of Nuclear Medicine, University Hospital Zürich, Zürich, Switzerland
- 2057** **A SNP in the HTR1A Gene Modulates Activity of Working Memory-Related Brain Regions**
Ana Popovic¹, Ulrich Rabl¹, Bernhard Meyer¹, Lucie Bartova¹, Christian Scharinger¹, Thomas Perkmann², Helmut Haslacher², Harald Esterbauer², Michael Freissmuth³, Harald Sitte³, Ewald Moser⁴, Lukas Pezawas¹
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- 2058** **Neurofeedback by functional Magnetic Resonance promotes Self-Modulation of premotor cortex**
Theo Ferreira Marins^{1,2}, Erika Rodrigues^{2,1,3}, Annerose Engel², Sebastian Hoefle², ROBERTO LENT¹, Jorge Moll², Fernanda Tovar-Moll^{2,1}
¹Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, ²D'Or Institute for Research and Education, Rio de Janeiro, Brazil, ³Augusto Motta University-UNISUAM, Rio de Janeiro, Brazil
- 2059** **Functional Connectivity MRI of the Subthalamic Nucleus in Healthy Controls**
Sheeba Arnold Anteraper¹, Christina Triantafyllou², Alice Sawyer³, John Gabrieli⁴, Susan Whitfield-Gabrieli⁴
¹Massachusetts Institute of Technology, Cambridge, United States, ²Massachusetts General Hospital, Charlestown, MA, ³Program in Clinical Psychology, Boston University, Boston, MA, ⁴Department of Brain and Cognitive Sciences, MIT, Cambridge, MA
- 2060** **Uncoupling of Amplitude of Low Frequency Fluctuations With Functional Connectivity in Depression**
Zhiliang Long¹, Yifeng Wang¹, Feng Liu¹, Qing Gao², Huaifu Chen¹
¹University of Electronic Science and Technology of China, Chengdu, China, ²University of Electronic Science and Technology of China, Chengdu, Sichuan
- 2061** **Atypical Amplitude of Low-Frequency Fluctuation in Social Anxiety Disorder at Specific Frequencies**
Youxue Zhang¹, Heng Chen¹, Fengmei Lu¹, Ling Zeng¹, Huaifu Chen¹
¹University of Electronic Science and Technology of China, Chengdu, China
- 2062** **Laminar analysis: The spatiotemporal profile of the BOLD response changes with depth**
Alexander Puckett¹, Kevin Aquino², Peter Robinson², Michael Breakspear³, Mark Schira¹
¹University of Wollongong, Wollongong, Australia, ²University of Sydney, Sydney, Australia, ³Queensland Institute of Medical Research, Brisbane, Australia
- 2063** **High correlations of the efficiency of brain functional networks with creativity**
Aiyang Liang^{1,2}, Bishan Liang¹, Zhang Delong³, Song Chang¹, Huang Huang¹, Zengjian Wang¹, Fangfang He¹, Ming Liu¹, Ruiwang Huang¹
¹Center for the Study of Applied Psychology, Key Laboratory of Mental Health and Cognitive Science of Guangdong Province, School of Psychology, South China Normal University, Guangzhou, China, ²Guangdong Science Center, Guangzhou, China, ³Department of Radiology, Guangdong Province Hospital of Traditional Chinese, Guangzhou, China
- 2064** **Expertise modulates affective evaluation over invasive treatment: an fMRI study on acupuncturists**
Minghao Dong^{1,2}, Jun Li¹, Wei Qin¹, Jie Tian¹
¹School of Life Science and Technology, Xidian University, Shaanxi 710071, China, Xi'an, China, ²Engineering Research Center of Molecular and Neuro Imaging, Ministry of Education, China, Xi'an, China

- 2065 Gray Matter Volume of Supramarginal Gyrus Predicts Later Chess-Skill Improvement in Chess Experts**
Xunjun Duan¹, Zhiliang Long¹, Qiyong Gong², Huaifu Chen¹
¹University of Electronic Science and Technology of China, Chengdu, China, ²Huaxi Magnetic Resonance Research Center, West China Hospital, Sichuan University, Chengdu, China
- 2066 Validation of motor network on resting-state fMRI with direct cortical stimulation for glioma cases**
YINYAN WANG^{1,2}, Yong Liu^{3,2}, Jiaojian Wang^{4,2}, Tao Jiang⁵
¹Beijing Neurosurgical Institute, Beijing, China, ²Brainnetome, Beijing, China, ³Institute of Automation, Chinese Academy of Sciences, Beijing, China, ⁴Electronic science and technology of China, Chengdu, China, ⁵Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medical University, Beijing, China
- 2067 Investigation and elimination of Nyquist-ghost fluctuation in EPI time-series scans with array coils**
Ross Mair^{1,2}, Stephanie McMains¹, Jonathan Polimeni², Thorsten Feiweier³, André Van der Kouwe², Keith Heberlein⁴
¹Harvard University — Center for Brain Science, Cambridge, United States, ²Athinoula A. Martinos Center for Biomedical Imaging, Harvard Medical School, Mass. General Hospital, Charlestown, United States, ³Siemens Healthcare, Erlangen, Germany, ⁴Siemens Medical Solutions USA, Charlestown, United States
- 2068 Regional variability of the brain hemodynamic response to spontaneous and step-induced CO2 changes**
Prokopis Prokopiou¹, Kyle Pattinson², Richard Wise³, Georgios Mitsis^{4,5}
¹Department of Electrical and Computer Engineering, McGill University, Montreal, Canada, ²Nuffield Department of Anaesthetics, University of Oxford, Oxford, United Kingdom, ³Cardiff University Brain Research Imaging Centre, Cardiff, United Kingdom, ⁴Department of Electrical and Computer Engineering, University Of Cyprus, Nicosia, Cyprus, ⁵Department of Bioengineering, McGill University, Montreal, Canada
- 2069 Spatial Resolution in Acquisition Determines Physiological Contribution of Resting-State fMRI Signal**
Ai-Ling Hsu¹, Changwei Wu², Yihong Yang³, Ching-Po Lin⁴, Jyh-Horng Chen⁵
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- 2070 A Pilot Study of 2X Temporal Resolution Wideband Gradient-Echo in Rodent fMRI**
Yun-An Huang^{1,2}, Shih-Hsien Yang³, Tzu-Hao Chao⁴, Edzer Wu⁵, Der-Yow Chen⁶, Kuan-Hung Cho⁷, Yeun-Chung Chang⁸, Tzi-Dar Chiueh¹, Changwei W. Wu³, Li-Wei Kuo⁹, Jyh-Horng Chen^{1,2}
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- 2071 Silent and distortion-free 3D whole-brain, T2-weighted fMRI**
Florian Wiesinger¹, Laura Sacolick², Anne Menini¹, Ana Beatriz Solana¹
¹GE Global Research, Munich, Germany, ²GE Healthcare, Munich, Germany
- 2072 Robust intrinsic connectivity networks in multibanded EPI data of the human resting state**
J. Gabriel Castrillon G¹, Christine Preibisch¹, Valentin Riedl²
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- 2073 Realtime fMRI — Effect of Motion Correction on Feedback**
Jens Sommer¹, Korhan Buyukturkoglu², Leonie Dietzsch¹, Belkis Ezgi Arkan¹, Mohit Rana², Sergio Ruiz^{3,2}, Tilo Kircher¹, Ranganatha Sitaram⁴, Hans Roettgers¹
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- 2074 Fast fMRI and Its Application to Events with Short Duration**
Ashish kaul Sahib¹, Michael Erb¹, Klaus Scheffler^{2,1}, Niels Focke³, Thomas Ethofer⁴
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- 2075 Intermittent Compared to Continuous Real-time fMRI Neurofeedback Boosts Control of Amygdala Activity**
Anja Dietrich¹, Lydia Hellrung¹, Maurice Hollmann¹, Burkhard Pleger¹, Elisabeth Roggenhofer², Christian Kalberlah³, Arno Villringer^{1,4,5,6}, Annette Horstmann^{1,4,3}
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- 2076 Effects of the colour red in sexual and emotional contexts on face processing in heterosexual males**
Johann Mueller¹, Vanessa Buechner², Petra Michl¹, Hella Parpart¹, Janusch Blautzik, Dr.³, Marco Paolini³, Maximilian Reiser³, Markus Maier², Kristina Hennig-Fast^{4,1}
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- 2077 Human early visual cortex predicts the motion of a single moving bar**
Wouter Schellekens¹, Nick Ramsey², Mathijs Raemaekers³
¹Brain Center Rudolf Magnus, Department of Neurology, UMC Utrecht, Utrecht, Netherlands, ²UMC Utrecht, Utrecht, Netherlands, ³University Medical Center Utrecht, Utrecht, Netherlands
- 2078 How restful is “Resting” State with all that noise?**
Jamila Andoh^{1,2,3}, Michael Ferreira¹, Ilana Leppert¹, Reiko Matsushita^{1,2}, Bruce Pike^{4,1}, Robert Zatorre^{1,2}
¹Montreal Neurological Institute, McGill University, Montreal, Canada, ²International laboratory for Brain, Music, and Sound Research (BRAMS), Montreal, Canada, ³Central Institute of Mental Health Mannheim, Baden-Württemberg, Mannheim, Baden-Württemberg, ⁴University of Calgary, Calgary, Alberta
- 2079 Sex differences in placebo analgesia in a clinically-relevant visceral pain model: A fMRI study**
Nina Theysohn¹, Julia Schmid², Adriane Icenhour³, Christine Mewes⁴, Michael Forsting¹, Elke Gizewski⁵, Sigrid Elsenbruch³, Sven Benson³
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- 2080 Reduction in vascular confounds of 3T and 7T fMRI group analysis results using the RESCALE method**
Martin Kueblboeck¹, Arkadiusz Komoroski², Allan Hummer³, Andreas Hahn⁴, Daniela M. Pfabigan⁵, André Hoffmann⁶, Christoph Kraus², Michael Woletz⁷, Eva-Maria Seidel⁸, Rupert Lanzenberger⁹, Claus Lamm¹⁰, Christian Windischberger¹
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- 2081 Neural correlates of coping strategy for boredom**
Sugiko Hanawa¹, Motoaki Sugiura¹, Takayuki Nozawa¹, Rui Nouchi¹, Ryoichi Yokoyama¹, Yuka Kotozaki¹, Tsuyoshi Araki¹, Benjamin Thyreau¹, Ryuta Kawashima¹
¹IDAC, Tohoku University, Sendai, Japan
- 2082 High-resolution single-shot gradient-echo echo planar imaging of the nucleus accumbens at 3Tesla**
Sabine Vollstädt-Klein¹, Sebastian Domsch², Derik Hermann¹, Holger Hill³, Jascha Zapp², Lothar Schäd⁴, Frauke Nees⁵, Falk Kiefer⁶, Karl Mann¹
¹Central Institute of Mental Health, Mannheim, Germany, ²Department of Computer Assisted Clinical Medicine, Mannheim, Germany, ³Karlsruhe Institute of Technology, Karlsruhe, Germany, ⁴Department of Computer Assisted Clinical Medicine, Heidelberg University, Mannheim, France, ⁵CIMH, Department of Cognitive and Clinical Neuroscience, N/A, ⁶Central Institute of Mental Health, ZI Mannheim, Mannheim, Germany
- 2083 Effects of a Psychotherapy, for the Treatment of Depressed Adolescents, on Neural Substrates (fMRI)**
Joana Straub¹, Paul Plener¹, Nina Sprober¹, Michael Koelch¹, Georg Groen², Birgit Abler²
¹Dept. of Child and Adolescent Psychiatry and Psychotherapy, University Hospital Ulm, Ulm, Germany, ²Dept. of Psychiatry and Psychosomatics, University Hospital Ulm, Ulm, Germany
- 2084 Comparison of multi-echo EPI and conventional short-TE EPI for an emotional event-related paradigm**
Dirk Müller¹, Mark Jacob¹, Michael Smolka¹, Nora Vetter¹, Michael Marxen¹
¹Technische Universität Dresden, Dresden, Germany
- 2085 BOLD resting state connectivity patterns: spin echo versus gradient echo EPI at 3T**
Piero Chiacchiaretta^{1,2}, Riccardo Navarra^{1,2}, MASSIMO CAULO^{1,2}, Gian Luca Romani^{1,2}, Ferretti Antonio^{1,2}
¹Department of Neuroscience and Imaging, University "G. d'Annunzio", Chieti, Italy, ²Institute for Advanced Biomedical Technologies (ITAB), University "G. d'Annunzio", Chieti, Italy
- 2086 Frequency specificities in the small world network using Empirical Mode Decomposition**
Long Qian¹, Yi Zhang², Li Zheng¹, Xiaopeng Song¹, Yue Cai¹, Mingze Xu¹, Yijun Liu¹
¹Department of Biomedical Engineering, College of Engineering, Peking University, Bei Jing, China, ²School of Life Sciences and Technology, Xidian University, Xi'an, China
- 2087 Deactivation of the motor cortex in tasks of hand movement in patients with frontal meningioma**
Erika Aguilar¹, Griselda Romero², Erick Pasaye³, Jorge Vazquez²
¹Instituto Nacional de Neurología y Neurocirugía, Mexico, Mexico, ²Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubiran, Mexico, Mexico, ³Instituto de Neurobiología Universidad Nacional Autónoma de México, Juriquilla Qro., Queretaro
- 2088 Reliability of Resting-State Connectivity using Simultaneous Multislice fMRI with Ultra-short TR**
Ali Golestani^{1,2}, J Jean Chen^{1,2}
¹Rotman Research Institute, Baycrest, Toronto, Canada, ²University of Toronto, Toronto, Canada
- 2089 Variable Slice-Thickness (VAST) EPI for the reduction of signal voids in GE-EPI at 7 Tesla**
Sascha Brunheim^{1,2}, Sören Johst¹, Stefan Maderwald³, Benedikt Poser⁴
¹Erwin L Hahn Institute for Magnetic Resonance Imaging, University Duisburg-Essen, Essen, Germany, ²Heinrich-Heine University, Duesseldorf, Germany, ³Erwin L. Hahn Institute for Magnetic Resonance Imaging, University of Duisburg-Essen, Essen, Germany, ⁴Maastricht University, Maastricht, Netherlands
- 2090 Decoding of visual angle within one second using multiband fMRI**
Alejo Nevado-Holgado¹, Stuart Clare², Karla Miller¹, Christopher Summerfield³
¹University of Oxford, Oxford, United Kingdom, ²FMRI Centre, University of Oxford, Oxford, United Kingdom, ³Oxford University, Oxford, United Kingdom
- 2091 Heart Rate Effects in Resting-State Gradient-Echo and Spin-Echo EPI BOLD**
Yasha Khatamian¹, Jean Chen¹
¹Rotman Research Institute, Toronto, Canada
- 2092 Neurobiological mechanisms of avatar identification underlying online role-playing game addiction**
Julia Dieter¹, Madlen Sell¹, Rebecca Ajnwojner¹, Michael Rieß¹, Tagrid Leménager¹, Karl Mann¹
¹Central Institute of Mental Health, Mannheim, Germany
- 2093 Dynamics of the BOLD response to breath-holding and paced deep breathing**
Joana Pinto¹, Inês Sousa², Pedro Vilela³, Patrícia Figueiredo¹
¹Institute for Systems and Robotics / Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal, ²Healthcare Sector, Siemens S.A, Oporto, Portugal, ³Imaging Department, Hospital da Luz, Lisbon, Portugal

- 2094 Improving sensitivity in fMRI group analysis by accounting for vascularization differences**
Samira Kazan¹, Siawoosh Mohammadi¹, Martina Callaghan², Robert Leech³, Christian Windischberger⁴, Nikolaus Weiskopf⁵
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- 2095 The Latency of Brain Shutdown: Dynamic Variations of Functional Connectivity Following KCI Injection**
Shih-Hsien Yang¹, Yun-An Huang², Tzu-Hao Chao³, Der-Yow Chen⁴, Li-Wei Kuo⁵, Jyh-Horng Chen², Changwei W. Wu¹
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- 2096 Examination of degree centrality in obesity: a resting-state fMRI study**
Isabel Garcia-Garcia¹, María Ángeles Jurado², Maite Garolera³, Idoia Marqués-Iturria⁴, Annette Horstmann⁵, Bárbara Segura², Roser Pueyo¹, María Sender-Palacios⁶, Maria Vernet-Vernet⁶, Arno Villringer⁷, Carme Junqué¹, Daniel Margulies⁸, Jane Neumann⁹
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- 2097 Differences of neural response patterns of facial emotion processing in three psychiatric disorders**
Rebecca Zöllner¹, Bruno Dietsche¹, Heide Lore Backes¹, Tilo Kircher¹, Carsten Konrad¹, Axel Krug¹
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- 2098 Cognitive and Emotional Components of Emotional Conflict Resolution: an fMRI study**
Zeynep Basgoze¹, Kathryn Cullen², Didem Gokcay¹
¹Middle East Technical University, Ankara, Turkey, ²University of Minnesota, Minneapolis, MN
- 2099 Hippocampal connectivity reliably predicts memory across sessions and age groups**
Alexandra Touroutoglou¹, Joseph Andreano¹, Lisa Feldman Barrett^{2,1}, Bradford C. Dickerson¹
¹Harvard Medical School, Boston, MA, ²Northeastern University, Boston, MA
- 2100 Exact nonlinear characterization of hemodynamic behavior based on fMRI experiments**
Chadia zayane¹, Taous Meriem Laleg-Kirati¹
¹King Abdullah University of Science and Technology, Thuwal Jeddah, Saudi Arabia
- 2101 Turbo-Feedback: A real-time fMRI neurofeedback tool using a novel network communication interface**
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- 2102 Applying Artificial Neural Networks to fMRI Data**
Aaron Morton¹, Robert Whelan², Eric Artiges³, Tobias Banaschewski⁴, Gareth Barker⁵, Arun Bokde⁶, Uli Bromberg⁷, Christian Büchel⁸, Patricia Conrod⁹, IMAGEN Consortium¹⁰, Herta Flor⁴, Vincent Frouin¹¹, Juergen GALLINAT¹², Penny Gowland¹³, Andreas Heinz¹⁴, Bernd Ittermann¹⁵, Herve Lemaitre¹⁶, Eva Loth⁹, Karl Mann⁴, Jean-Luc Martinot³, Marie-Laure Paillère Martinot³, Ruben MIRANDA³, Frauke Nees¹⁷, Tomas Paus¹⁸, Zdenka Pausova¹⁹, Jean-Baptiste Poline¹¹, Marcella Rietschel⁴, Trevor Robbins²⁰, Michael Smolka²¹, Helene VULSER²², Gunter Schumann⁵, Hugh Garavan²
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- 2103 Neural substrates involved in the integration of object properties and intended actions**
Simona Monaco¹, Ying Chen¹, Noura AlOmawi¹, J. Douglas Crawford¹
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- 2104 Reduced default-mode network dynamics during the rest state in sickle cell disease patients**
HUI SHI ZHANG¹, Yvonne Datta², Bin He³, Yunfeng Lu³
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- 2105 Functional connectivity changes in patients with chronic Hepatitis C**
Shahrazad Kharabian Masouleh¹, Sabine Herzig², Matthias Schroeter¹, Krzysztof Gorgolewski¹, Lisa Klose¹, Hannelore Tenckhoff³, Thomas Berg³, Manfred Wiese³, Angelika Thöne-Otto², Daniel Margulies¹, Arno Villringer⁴
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- 2106 Functional connectivity based classification of the primary somatosensory cortex**
Filippo Migliorati¹, Leonardo Cerliani², Valeria Gazzola³, Christian Keysers⁴
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- 2107 BDNF blood levels correlate with insula and dorsolateral prefrontal cortex activation during rest**
Marie Woelfer¹, Anna Krause², Tanja Brigadski³, Martin Walter²
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- 2108 Test-retest Reliability of Resting State fMRI Metrics in Youth with and without ADHD**
Krishna Somandepalli¹, Clare Kelly¹, F. Xavier Castellanos^{1,2}, Xi-Nian Zuo³, Michael Milham^{2,4}, Adriana Di Martino¹
¹Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience, NYU Langone Medical Center, New York, NY, ²Nathan Kline Institute for Psychiatric Research, Orangeburg, New York, NY, ³Institute of Psychology, Chinese Academy of Sciences, Beijing, China, ⁴Child Mind Institute, New York, NY
- 2109 Making EEG-fMRI child-friendly: the effects of cartoons on EEG fMRI epilepsy maps**
Maria Centeno¹, Tim Tierney², Kelly St Pier³, Ronit Pressler⁴, J Helen Cross⁵, Suejen Perani⁶, Elhum Shamshiri², Chris Clark⁷, David Carmichael⁷
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- 2110** **Zoom EPI as a means for increasing spatial resolution in human fetal functional MRI**
Lauren Grove¹, Angela Vila², Timothy Lozon², Yongquan Ye³, Yashwanth Katkuri², Moriah Thomason¹
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- 2111** **Reproducibility of principal components in longitudinal functional connectivity MRI data**
Michael Ferguson¹, Jeffrey Anderson¹, Jared A. Nielsen Nielsen²
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- 2112** **Impact of hematocrit on measurement of the intrinsic brain**
Zhen Yang¹, Daniel Lurie¹, David O'Connor¹, Cameron Craddock^{1,2}, Michael Milham^{1,2}
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- 2113** **Lateralization of Resting State Networks and Relationship to Age and Gender**
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¹University of New Mexico, Dept. of Electrical and Computer Engineering, Albuquerque, NM, ²Mind Research Network, Albuquerque, NM
- 2114** **The rich club of the brain in bipolar disorder**
Anton Lord¹, Gloria Roberts², Michael Breakspear³, Philip Mitchell²
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- 2115** **Hypercapnia calibration of BOLD FMRI response reveals improved relationship to task performance**
Nicolette Schwarz¹, Brittany Hawkshead², Spencer Liebel², Joshua Lukemire², Lawrence Sweet²
¹University of Georgia, Athens, GA, ²University of Georgia, Athens, United States
- 2116** **Characteristics of Brain Function associated with Intention to Conceal**
Young-Ji Eum¹, Eun-Hye Jang², Jin-Sup Eom³, Jin-Hun Sohn⁴
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- 2117** **Sexual Dimorphism in Brain Mechanism Concerning Shyness and Social Anxiety Using Resting State FMRI**
Sunima Lama¹, Xun Yang², Fei Li¹, Qiyong Gong¹, Xiaoqi Huang¹
¹Huaxi MR Research Center (HMRRC), Department of Radiology, West China Hospital of Sichuan University, Chengdu, China, ²Department of Sociality and Psychology, Southwest University for Nationalities, Chengdu, China
- 2118** **Influence of Latrophilin-3 (LPHN3) on Brain Structure and Function in Adults with ADHD**
Erika Proal^{1,2,3}, Mauricio Arcos-Burgos⁴, Ana Moreno⁵, Gonzalo Rojas Costa⁶, Valeria Ruiz^{7,8}, Yasser Alemán-Gómez⁹, Edith Pomarol-Clote^{5,10}, Raymond Salvador^{5,10}, Joaquim Radua^{11,5}, Marta Ribases^{12,13}, Josep Antoni Ramos-Quiroga^{14,13}, Cristina Sanchez-Mora^{14,13}, Rosa Bosch^{14,13}, Vanesa Richarte^{14,13}, Miguel Casas^{14,13}, Clare Kelly¹⁵, Michael Milham¹⁶, F. Xavier Castellanos^{17,18}
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- 2119 Right and left hand movement task compared to simultaneous task movements using fMRI**
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DIFFUSION MRI

- 2120 Effect sizes of permeability-diffusivity Index and fractional anisotropy in schizophrenia patients**
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- 2121 Thick and fast: In vivo correlation between Axon Diameter and Conduction Velocity in the Human brain**
Assaf Horowitz¹, Daniel Barazany¹, Ido Tavor¹, Galit Yovel¹, Yaniv Assaf¹
¹Tel Aviv University, Tel Aviv, Israel
- 2122 Correspondence of DTI to histological parameters from in situ non-fixated post-mortem human brain**
Rafael Emídio da Silva¹, Glaucia Aparecida SANTOS², Leonardo Sgobin², Ana Tereza Alho², Edson Amaro Junior³
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- 2123 Schizophrenia as a disease model for testing advance diffusion imaging/modeling approaches**
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- 2124 Multiparametric diffusion changes in Alzheimer's disease — a joint independent component analysis**
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- 2125 Efficacy of distortion correction on diffusion imaging: comparisons with FSL-eddy and eddy_correct**
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- 2126 Corticoreticular pathway lesion in pediatric patients with trunk instability**
Su Min Son¹, Sung Ho Jang¹, Hyeok Gyu Kwon¹, Woo Hyuk Jang², Jeong Pyo Seo³, Dong yeong Seo⁴
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- 2127 Significant radiologic parameters representing therapeutic effect of rehabilitation**
Su Min Son¹, Sung Ho Jang¹, Hyeok Gyu Kwon¹, Woo Hyuk Jang², Jeong Pyo Seo³, Dong yeong Seo⁴
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- 2128 Improved Diffusion Kurtosis Imaging and Direct Propagator Estimation Using 6-D Compressed Sensing**
Vladimir Golkov^{1,2}, Marion I. Menzel¹, Tim Sprenger^{1,2}, Mohamed Souiai², Axel Haase², Daniel Cremers², Jonathan I. Sperl¹
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- 2129 Does diffusion tensor imaging after cardiac arrest improve prediction of neurological outcome?**
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- 2130 DTI — its underpinnings on a microstructural basis**
Arne Seehaus¹, Alard Roebroek¹, Lúcia Fonseca^{2,3}, Matteo Bastiani¹, Hans-Juergen Bratzke⁴, Nicolás Lori³, Anna Vilanova⁵, Rainer Goebel¹, Ralf Galuske⁶
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- 2131 Altered Structural White Matter Networks in Youth with Perinatally Acquired HIV**
Talia Nir¹, Kristina Uban², Megan Herting², Ram Yoge³, Paige Williams⁴, Kathleen Malee⁵, John Csenansky⁵, Lei Wang⁵, Sharon Nichols⁶, Yanling Huo⁴, Neda Jahanshad¹, Paul Thompson¹, Elizabeth Sowell^{2,7}
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- 2132 Relationship between combined white matter characteristics and inhibition in a healthy aging sample**
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- 2133 Lesion (in-)dependent volumetric and microstructural thalamic alterations in patients with MS**
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- 2134 Whole-brain connectivity-based parcellation using diffusion tensor imaging**
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- 2135 Fractional anisotropy alterations in patients with hypertension — preliminary results**
Agnieszka Sabisz¹, Patrycja Naumczyk¹, Jerzy Kwela¹, Edyta Szurowska², Krzysztof Narkiewicz²
¹University of Gdańsk, Gdańsk, Poland, ²Medical University of Gdansk, Gdańsk, Poland
- 2136 Comparison of Cartesian and Radial acquisition in q-space for Diffusion Spectrum Imaging (DSI)**
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- 2137 Faux-ctography? Tracing and diffusion MRI in the same brain reveal what is real and what is not**
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- 2138 Anatomical connectivity in prodromal Huntington Disease**
Frieda van den Noort^{1,2}, Andreia Faria², Tilak Ratnanather³, Christopher Ross⁴, Susumu Mori², Laurent Younes³, Michael Miller³
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- 2139 Surface-based DTI analysis in Subcortical vascular cognitive impairment**
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- 2140 DTI as a diagnostic marker — lessons learned from the European DTI Study in Dementia**
Stefan Teipel¹, Martin Dyrba², Giovanni Frisoni³, Andreas Fellgiebel⁴, Massimo Filippi⁵, Harald Hampel⁶
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- 2141 Spatially dependent regularization of high-resolution DTI by means of TGV and ICA**
Gernot Reishofer¹, Kristian Bredies², Karl Koschutnig³, David Porter⁴, Margit Jehna⁵, Hannes Deutschmann⁵
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- 2142 Surface-based Group-specific Nodes Parcellation Based on Diffusion Tensor Tractography**
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- 2143 White Matter Integrity in Multiple Sclerosis Patients with Impaired and Preserved Processing Speed**
Oihane Rilo¹, Naroa Ibarretxe-Bilbao¹, Javier Peña¹, Alberto Cabrera², Jose Ontañón², Mar Mendibe³, Alfredo Antiguada⁴, Natalia Ojeda¹
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- 2144 Impact of DWI denoising on Track-Density Imaging**
Pierrick Coupe¹, Olivier Periot², Jose Manjon³, Bassem Hiba⁴, Michèle Allard⁵
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- 2145 Connectivity-based parcellation of the SN/VTA using diffusion tensor imaging at 7T**
Matthew Betts¹, Joern Kaufmann², Jan Heide¹, Ralf Lützkendorf³, Emrah Düzel¹
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- 2146 Sex differences in the IQ-white matter microstructure relationship: A DTI study**
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- 2147 Structural alterations in amyotrophic lateral sclerosis revealed by probabilistic fiber tractography**
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- 2148 RESOLVE reduces geometrical distortions, pulse artifacts and facilitates tracking in difficult areas**
Mikkel Petersen¹, Jesper Frandsen¹, Ryan Sangill¹, Torben E. Lund¹
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- 2149 Intraventricular administration of AP5 prevents spatial learning and partially affects diffusion MRI**
Yael Piontkewitz¹, Yaniv Assaf²
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- 2150 Estimation of Constrained Spherical Deconvolution based Tractography for Brain Network Construction**
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- 2151 Fiber Tracking Criteria for Reliable Brain White Matter Network Construction**
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- 2152 Improved post-mortem human brain imaging with diffusion weighted steady-state free precession at 7T**
Sean Foxley¹, Saad Jbabdi¹, Wilfred Lam¹, Olaf Ansorge², Stuart Clare¹, Gwenaelle Douaud¹, Karla Miller¹
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- 2153 DTI with one millimeter isotropic resolution provides a new insight into the in vivo human brain**
Gernot Reishofer¹, Karl Koschutnig², Christian Langkammer³, David Porter⁴, Margit Jehna⁵, Hannes Deutschmann⁵
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- 2154 Die fette Katze wird immer fetter: New tracking and interactive tools in AFNI-FATCAT**
Paul Taylor^{1,2}, Ziad Saad³
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- 2155 Pooling of DTI metrics from different MRI-protocols: a methodological approach in ALS**
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- 2156 Involvement of the frontal corpus callosum in progressive supranuclear palsy: a DTI study**
Hans-Peter Müller¹, Hans-Jürgen Huppertz², Johannes Rosskopf³, Martin Gorges⁴, Elmar Pinkhardt¹, Albert Ludolph¹, Jan Kassubek¹
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- 2157 A multicentre approach for the detection of patterns of impairment in Huntington's disease by DTI**
Hans-Peter Müller¹, Nicola Hobbs², Sigurd Süßmuth³, Georg Groen⁴, Jan Kassubek¹, Reiner Sprengelmeyer⁵, Albert Ludolph¹, Sarah Tabrizi⁶, Michael Orth⁷, Bernhard Landwehrmeyer¹
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- 2158 Reduced structural connectivity in the default mode network in 22q11.2 deletion syndrome**
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- 2159 Mapping Brain Connectivity with Diffusion Tensor Imaging in Human Tau Mutant Mice**
Madelaine Dajani¹, Neda Jahanshad^{2,3}, Kristian Eschenburg^{4,3}, Julio Villalon-Reina⁵, Talia Nir⁶, Russell Jacobs⁷, Hongwei Dong⁸, Berislav Zlokovic³, Paul Thompson⁹
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- 2160 A pilot investigation of brain networks in multiple sclerosis using 7-Tesla diffusion MRI**
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- 2161 Brain Network denoising using Principal Component Analysis**
Liang Zhan¹, Bryon A. Mueller², Christophe Lenglet², Essa Yacoub³, Guillermo Sapiro⁴, Noam Harel², Kelvin O. Lim², Paul Thompson⁵
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- 2162 Diffusion Tensor Imaging of the Accumbens Tract: Development and Associations with Reward**
Katherine Karlsgodt¹, Tossi Ikuta², Angelica Bato³, Bart Peters³, Pamela DeRosse³, Philip Szeszko³, Anil Malhotra³
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- 2163 Connectomics based multi-modal graph measures in Bipolar Disorder**
Aleksandar Tenev¹, Slobodan Kalajdziski¹, Dejan Gjorgjevikj¹, Ljupco Kocarev², Eduard Vieta³, Dina Popovic⁴, Luis Píntor⁵, Pablo Villoslada⁶, Vesna Prchkovska⁷
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- 2164 Study of spastic paraparesis based on TBSS analysis using Diffusion Tensor Imaging at 3T**
Oscar Marrufo¹, Roger Carrillo¹, Rodrigo Martin², Carolina Mejias¹, Amalia Pacheco¹, Alfredo Rodriguez², Steve Vargas¹, Jesus Taboada³
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- 2170 Identifying rhythmic brain activity that Granger causes behavioral output variables**
Irene Winkler¹, Stefan Haufe², Klaus-Robert Müller¹, Sven Dähne¹
¹Technische Universität Berlin, Berlin, Germany, ²City College of New York, New York, United States
- 2171 Oscillatory correlates of the McGurk illusion**
Yadira Roa Romero¹, Johanna Balz¹, Daniel Senkowski¹, Julian Keil¹
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- 2172 FMRI Constrained Source Analysis on Event-Related Potential in Anticipation Process**
Yasunori Kotani¹, Yoshimi Ohgami¹, Jun-ichiro Arai², Shigeru Kiryu³, Yusuke Inoue⁴
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- 2173 Viewing Comforting Hands Mitigates Pain in High Pain Catastrophisers: A Laser Evoked Potential Study**
Xiaoyun Li¹, Hazel Wright¹, Stephanie Cook¹, Nicholas Fallon², Andrej Stancak¹
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- 2174 Components of event-related potential preceding face, word, and symbol stimuli**
Yoshimi Ohgami¹, Yasunori Kotani¹, Jun-ichiro Arai², Shigeru Kiryu³, Yusuke Inoue⁴
¹Tokyo Institute of Technology, Meguro, Tokyo, Japan, ²Daikin Industries, Tokyo, Japan, ³The University of Tokyo, Tokyo, Japan, ⁴Kitasato University, Sagamihara, Japan
- 2175 EEG source imaging of microstates during resting state**
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- 2176 Evidence on 'When' & 'How' breathlessness impacts the processing of emotional contexts**
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- 2165 Optimal Re-referencing Strategy for the Detection of P300 Sources from High-density EEG**
Quanying Liu¹, Joshua Baisters^{1,2}, Onno Van der Groen¹, Marc Bächinger¹, Nicole Wenderoth^{1,3}, Mantini Dante^{1,4}
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- 2166 Put subjects on their head: EEG is strongly modulated by head position**
Justin Rice¹, Christopher Rorden², Lucas Parra³
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- 2167 Effect of corpus callosum on task-related beta power modulation**
Francois Trottier Duclos¹, Patricia Bourgault¹, Kevin Whittingstall¹
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- 2168 Narratives consistently modulate alpha-band activity**
Stefan Haufe¹, Daniel Rosenthal², Paul DeGuzman², Uri Hasson³, Lucas Parra¹
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- 2169 Objective template-based selection of EEG ICA epilepsy-related components**
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- 2177 Effects of the Steady-State Visual Stimuli on the On-Going Alpha Rhythm**
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- 2178 EEG source connectivity analysis: from dense array recordings to brain networks**
Mahmoud Hassan¹, Claude Berrou², Olivier dufor², Isabelle Merlet¹, Fabrice Wendling¹
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- 2179 Changes of the coupling of the Broca's area and language network following cTBS in healthy subjects**
Woo-Kyoung Yoo¹, Marine Vernet², Shahid Bashir³, Anna-Katharine Brem⁴, Frederick Ifert-Miller⁵, Ahn HyunJung⁶, Chang-Hwan Im⁷, Mark Eldaief⁶, Alvaro Pascual-Leone⁵
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- 2180 CLARA: Classical LORETA Analysis Recursively Applied**
Todor Jordanov¹, Karsten Hoechstetter², Patrick Berg¹, Isabella Paul-Jordanov¹, Michael Scherg¹
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- 2181 Volume Conduction and Hurst Exponent Estimation for the EEG**
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- 2182 Effect of Handedness on P200 and its Relation with Change Detection**
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- 2183 Dynamic Changes of Brain Functional Connectivity**
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- 2184 Measurement of Cognitive Dynamics during Video Watching Through Event-Related Potentials**
Emel Erdogan¹, Elif Kurt^{2,3}, Adil Deniz Duru⁴, Atila Uslu⁵, Canan Basar Eroglu⁶, Tamer Demiralp⁵
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- 2185 The complexity of brain dynamics increased with age: an EEG Study**
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- 2186 Non-Stationary Brain Activity Mapping using Joint Spatio-Temporal Dictionaries**
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- 2187 Neural mechanisms of interpersonal synchrony behavior**
Yan Mu¹
¹University of Maryland, College Park, College Park, United States
- 2188 Exploratory Analysis of Brain Connectivity in Short-term Meditation by Using Transfer Entropy**
Vincent Chien¹, Chii-Shyang Kuo¹, Arthur C. Tsa², Michelle Liou³, Philip Cheng¹
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- 2189 Rapid approach for the digitization of EEG electrode positions**
Reyko Tech¹, Fernando Gasca¹, Michael Wagner¹, Jörn Kastner¹, Manfred Fuchs¹
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- 2190 A Case Study on Functional Brain Mapping: Comparison ECoG, ECS and fMRI based Mapping Techniques**
Christoph Kapeller¹, Robert Prueckl¹, Kyousuke Kamada², Hiroshi Ogawa², Satoru Hiroshima², Gerwin Schalk³, Christoph Guger¹
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- 2191 Neuronal networks in Burst Suppression EEG patterns in Newborns as revealed by source analysis**
Christine Reinicke¹, Muthuraman Muthuraman², Moeller Friederike³, Abdul Anwar⁴, Kidist Mideksa⁴, Ronit Pressler⁵, Günther Deuschl⁶, Michael Siniatchkin⁷, Stephani Ulrich³, Natia Japaridze⁸
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- 2192 Identifying the origin of the source in multi-focal epilepsy patients**
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- 2193 Source localization with the MUSIC algorithm and the effect of spatial prewhitening: a SEP paradigm**
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- 2194 Pre-Stimulus EEG Patterns Associated with the Attention, Memory and Decision Making Performance**
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- 2195 Extending the LIMO EEG toolbox to the statistical analysis of spectral power in EEG data**
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- 2196 Distinct neural manifestations of temporal structure and attention shifting in temporal expectations**
Assaf Breska¹, Leon Deouell¹
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- 2197 EEG correlates of valence, arousal and subjective liking in response to dynamic visual stimuli**
Miray Erbey¹, Sencer Melih Deniz², Tamer Demiralp³
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- 2198 Brain Source Analysis of Interictal Epileptiform Discharges Using a Rat Model of Focal Epilepsy**
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- 2199 Neuronal correlates of passive body rotation — an EEG study**
Valerie Kirsch¹, Matthias Ertl¹, Siegbert Krafczyk¹, Marianne Dieterich¹
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- 2200 Lack of Bereitschaft potential may differentiate atypical myoclonus from psychogenic events**
Helen Barkan¹
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- MEG**
- 2201 Improved spatial acuity of reconstructed coherent networks using a phase-lag optimised beamformer**
Mark Drakesmith^{1,2}, Wael El-Deredy², Stephen Welbourne²
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²University of Manchester, Manchester, United Kingdom
- 2202 Mirror illusion triggers high gamma oscillations in the absence of movement**
Andrey Prokofyev¹, Anna Butorina¹, Maria Nazarova², Vladimir Litvak³, Tatiana Stroganova¹
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- 2203 Brain efficiency and resting state networks: a dynamic relationship**
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- 2204 Temporal nonlinearities in visual Magnetic Evoked Fields**
David Crewther¹, Alyse Brown¹, Laila Hugrass¹
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- 2205 A Task Independent Network Revealed by Symbolic Mutual Information Analysis of MEG**
Stephen Robinson¹, Arnold Mandell², Richard Coppola¹
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- 2206 MEG Auditory Brainstem Responses to complex sounds**
Emily Coffey^{1,2,3,4}, Alexander Chepesiuk⁵, Sibylle Herholz⁶, Sylvain Baillet⁷, Robert Zatorre⁸
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- 2207 Enhanced Clinical MEG Pre-Surgical Functional Mapping: Reliability and Spatiotemporal Clustering**
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- 2208** **Prestimulus oscillatory power and connectivity pattern predispose conscious somatosensory perception**
Gianpaolo Demarchi¹, Anja Wühle², Gianpiero Monittola¹, Julia Frey¹, Tzvetan Popov³, Christoph Braun², Nathan Weisz¹
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- 2209** **Validation of MEG as a Pre-surgical Evaluation Tool in Pediatric Patients With Intractable Epilepsy**
helen barkan¹, Shannon Sparrow²
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- 2210** **Homology between Functional Hierarchy in Human and Anatomical Hierarchy in Non-human primates**
Giorgos Michalareas¹, Julien Vezoli², Stan Van Pelt³, Pascal Fries⁴
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MR SPECTROSCOPY

- 2211** **Glutamatergic dysfunction in the anterior cingulate cortex in adults with ADHD: a MRS study**
Jochen Bauer¹, Patricia Ohrmann¹, Anne Werner¹, Waldemar Kohl¹, Anya Pedersen², Harald Kugel³
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- 2212** **Feasibility and reproducibility of auditory cortex MR spectroscopy at 7T**
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- 2213** **Effects of HIV exposure on metabolite levels in Midfrontal Gray Matter in children: at 5 and 7 years**
Martha Holmes¹, Kenneth Mbuga¹, Francesca Little², Mark Cotton³, Andre J.W. van der Kouwe⁴, Barabara Laughton⁵, Ernesta Meintjes¹
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- 2214** **Effects of HIV exposure and gender on VMI scores and neurometabolite levels at 5 and 7 years**
Martha Holmes¹, Kenneth Mbuga¹, Francesca Little², Mark Cotton³, Kaylee van Wyhe³, Barabara Laughton³, Andre J.W. van der Kouwe⁴, Ernesta Meintjes¹
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- 2215** **HIV exposure effects on neuropsychological measures vs metabolite levels in Basal Ganglia at 7 years**
Martha Holmes¹, Kenneth Mbuga¹, Francesca Little², Mark Cotton³, Kaylee van Wyhe³, Barabara Laughton³, Andre J.W. van der Kouwe⁴, Ernesta Meintjes¹
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- 2216** **Investigating the role of GABA in posterior cingulate cortex during resting state**
Jorge Arrubla^{1,2}, Desmond Tse¹, Christin Amkreutz^{1,2}, Irene Neuner^{1,2,3}, Jon Shah^{1,3,4}
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2217 Measuring neurochemical changes after exercise using ultra-high field MR Spectroscopy
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2218 Correcting for volume relaxation times significantly affects MR spectroscopy GABA concentrations
Nils Muhlert¹, Andrew Lawrence¹, Brealy Jennifer¹, Sonya Foley¹, Krish Singh¹, Derek Jones¹, David Linden¹, C. Evans¹
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2219 GABA-spectroscopy in patients suffering from migraine
Adina Bathel¹, Tobias Schmidt-Wilcke², Philipp Stude², Martin Tegenthoff³, Benjamin Glaubit³, Lauren Haag⁴
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2220 Effects of ART timing and HIV progression on neuro-metabolite levels in basal ganglia at age 5 years
Kenneth Mbugua¹, Martha Holmes¹, Aaron Hess², Els Dobbels³, Francesca Little⁴, Mark Cotton³, André Van der Kouwe⁵, Barbara Laughton³, Ernesta M. Meintjes¹
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2221 Glutamatergic modulation of alexithymia in anterior cingulate cortex and insula
Lejla Colic^{1,2}, Liliana Ramona Demenescu^{1,2,3}, Meng Li^{1,3}, Coraline Metzger^{1,3,2}, Martin Walter^{1,3,2,4}
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2222 GABA and Glutamate Temporal Dynamics: A Double-blind FMRSI Drug-Challenge Crossover Study at 4T
John Jensen¹, Marisa Silveri¹, Lisa Nickerson¹, Stephanie Licata¹, Kristina Wang¹, Carolyn Caine¹, Rosemond Villefuerte¹, Hill Kevin¹, David Olson¹
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2223 Performance optimized lipid artifact removal (POLAR) with BASE-SLIM
Peter Adany¹, Phil Lee¹, In-Young Choi¹
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MULTI-MODAL IMAGING

2224 Integrated analysis and visualization of structural and functional connectivity of the brain
Carolyn Langen¹, Arfan Ikram², Meike Vernooij², Tonya White^{3,4}, Wiro Niessen^{5,6}
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2225 Investigating Neurovascular Coupling in Infants with Brain Injury and Seizures
Chuen Wai Lee^{1,2,3}, Laura Dempsey^{4,2}, Robert Cooper^{4,2}, Harsimrat Singh^{4,2}, Andrea Edwards^{3,2}, Jeremy Hebden^{4,2}, Topun Austin^{3,2}
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2226 Multimodality brain connectivity measurements in healthy subjects and patients with type 1 diabetes
Alle Meije Wink¹, Frederik Barkhof¹, Betty Tijms¹, Petra Pouwels¹, Menno Schoonheim¹, Cornelis Stam¹, Arjan Hillebrand¹, Matteo Demuru², Matteo Frascini², Michaela Diamant¹, Eelco Duinkerken¹
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- 2227 The onset age of L2 acquisition influences the brain networks in Cantonese–Mandarin bilinguals**
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- 2228 MRI with and without EEG — what makes the difference?**
Carina Klein¹, Jürgen Hänggi¹, Roger Lüchinger², Lutz Jäncke^{1,3}
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- 2229 A comparison of fMRI-ICA and ESI in epilepsy reveals misclassification using an automatic classifier**
Danilo Maziero¹, Marcio Sturzbecher¹, Tonicarlo Velasco², Carlo Rondinoni³, Agustin Castellanos⁴, David Carmichael⁵, Carlos Salmon¹
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- 2230 Increased cerebral water content in hemodialysis patients**
Kathrin Reetz¹, Zaheer Abbas², Ana Costa³, Vincent Gras⁴, Frances Tiffin-Richards³, Shahram Mirzazade³, Bernhard Holschbach⁵, Rolf Frank⁶, Athina Vassiliadou⁷, Thilo Krüger⁸, Frank Eitner⁸, Jörg Schulz¹, Jürgen Flöge⁸, Nadim Shah⁹
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- 2231 Fusing EEG and fMRI in local region: estimating brain function and HRFs using group PCA+CCA**
Li Dong¹, Pedro A. Valdes-Sosa², Dezhong Yao¹
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- 2232 Reducing the gradient artefact in simultaneous EEG-fMRI by adjusting the EEG cap lead configuration**
Karen Julia Mullinger^{1,2}, Muhammad Enamul Hoque Chowdhury¹, Richard Bowtell¹
¹University of Nottingham, Nottingham, United Kingdom, ²University of Birmingham, Birmingham, United Kingdom
- 2233 EEG-fMRI reveals spatial dependency of BOLD signal on ERP peaks during face recognition**
Jonathan Wirsich^{1,2,3,4}, Christian Bénar^{3,4}, Jean-Philippe Ranjeva^{1,2}, Médéric Descoins^{1,2,3,4}, Elisabeth Soulier^{1,2}, Arnaud Le Troter^{1,2}, Sylviane Confort-Gouny^{1,2}, Catherine Liégois-Chauvel^{3,4}, Maxime Guye^{1,2}
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- 2234 BIAP: a novel software package for multi model brain image analysis free for academic use**
Jan De Munck¹
¹VU University Medical Center, Amsterdam, Netherlands
- 2235 Roles of White Matter Perfusion and Integrity on the Processing Speed Deficit in Schizophrenia**
Susan Wright¹, Pan Jiang², Florian Muellerklein³, Katie Nugent², Hemalatha Sampath², Kavita Thangavelu², J. Wang⁴, Elliot Hong⁵, Joshua Chiappelli⁶, Laura Rowland⁷, Peter Kochunov⁶
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- 2236 Detect state differences using ASL and BOLD fMRI during resting state**
Qihong Zou^{1,2}, Binke Yuan^{3,4}, Hong Gu², Danny JJ Wang⁵, Jia-Hong Gao^{1,6}, Yihong Yang², Yu-Feng Zang^{3,4}
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- 2237 Inverse relationship between energetic costs and functional connectivity in human brain networks**
Valentin Riedl¹, Alexander Drzezga², Christian Sorg³
¹Technische Universität München, Munich, Germany, ²University of Köln, Cologne, Germany, ³Department of Psychiatry, Neuroradiology and Nuclear Medicine, Technische Universität München, Munich, Germany
- 2238 Multimodal SVM for prediction of prodromal AD in MCI subjects using multicenter DTI and MRI data**
Martin Dyrba¹, Michael Ewers², Claudia Plant³, Frederik Barkhof⁴, Andreas Fellgiebel⁵, Lucrezia Hausner⁶, Massimo Filippi⁷, Thomas Kirste⁸, Stefan Teipel⁹
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- 2239 Thyroid Hormones are related to Brain Structure Six Years Later in 437 Euthyroid Elderly, (Lifespan Development / Aging)**
Sarah Madsen¹, Letty Liang², Christina Boyle¹, Priya Rajagopalan¹, Anne Cappola³, James Becker⁴, Oscar Lopez⁴, Paul Thompson¹, The ADNI⁵
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- 2240 Carbon-wire based movement artifact removal in EEG-fMRI outperforms state-of-the-art**
Johan van der Meer¹, André Pampel², Jennifer Ramautar³, German Gomez-Herrero³, Jöran Lepsien², Harald Möller², Martin Walter¹
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- 2241 Language lateralization in left temporal lobe epilepsy: A comparison of fMRI, MEG and Wada Test**
Kirsten Herfurth¹, Nadine Mueller¹, Julie Roesch², David Gosar³, Stefan Rampp¹, Hajo Hamer¹, Elisabeth Pauli¹
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- 2242 Automated detection of functional and structural disconnection in AD using multiple kernels SVM**
Martin Dyrba¹, Michel Grothe¹, Thomas Kirste², Stefan Teipel³
¹German Center for Neurodegenerative Diseases (DZNE), Rostock, Germany, ²University of Rostock, Rostock, Germany, ³University of Rostock and DZNE, Rostock, Germany
- 2243 Time-frequency analysis of EEG data recorded at ultra-high magnetic fields**
Jürgen Dammers¹, Omid Abbasi^{2,1}, Jorge Arrubla^{1,3}, Tracy Warbrick¹, Irene Neuner^{1,3,4}, Nadim Shah^{1,5,4}
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- 2244 Bayesian modeling of spatial-temporal-spectral patterns of EEG activity: application to EEG-fMRI**
Radek Marecek¹, Michal Miki¹, Martin Lamoš², Marek Barton¹, Ivan Rektor¹, Milan Brázdil¹
¹CEITEC, Masaryk University, Brno, Czech Republic, ²Department of Biomedical Engineering, Brno University of Technology, Brno, Czech Republic

- 2245** **RtfMRI Neurofeedback of Thalamus Enhances Correlation of Thalamic BOLD Activity and EEG Alpha Rhythm**
Vadim Zotev¹, Kymberly Young¹, Raquel Phillips¹, Han Yuan¹, Masaya Misaki¹, Jerzy Bodurka^{1,2}
¹Laureate Institute for Brain Research, Tulsa, OK, ²College of Engineering, University of Oklahoma, Norman, OK
- 2246** **Reduced cerebrovascular reactivity in young adults carrying the APOE ε4 allele**
Sana Suri¹, Clare Mackay¹, Michael Kelly¹, Michael Germuska¹, Elizabeth Tunbridge¹, Giovanni Frisoni², Paul Matthews³, Klaus Ebmeier¹, Daniel Bulte¹, Nicola Filippini¹
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- 2247** **Posture Alters Human Resting State**
Robert Thibault¹, Michael Lifshitz¹, Jennifer Jones¹, Amir Raz¹
¹McGill University, Montreal, Canada
- 2248** **Constructing Task Connectome Using Functional-by-structural Mapping and Stochastic Graph Analysis**
Alex Leow¹, Liang Zhan², Teena Moody³, Jesse Brown⁴, Paul Thompson², Jamie Feusner³
¹University of Illinois at Chicago, Chicago, IL, ²Imaging Genetics Center, Institute for Neuroimaging & Informatics, Dept of Neurology, USC, Los Angeles, CA, ³UCLA, Los Angeles, CA, ⁴UCSF, San Francisco, CA
- 2249** **In vivo histology of the myelin g-ratio**
Nikola Stikov¹, Jennifer Campbell¹, Mathieu Boudreau¹, Sridar Narayanan¹, Thomas Stroh¹, Stephen Nuara¹, Jennifer Novek¹, Stephen Frey¹, Ming-Kai Ho¹, Barry Bedell¹, Bruce Pike²
¹Montreal Neurological Institute, Montreal, Canada, ²University of Calgary, Calgary, Alberta
- 2250** **Amyloid-β weighted cortical thinning patterns in Alzheimer's disease**
Chan Mi Kim¹, Jae-Hong Lee¹, Jee Hoon Roh²
¹Department of Neurology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, Republic of, ²Department of Neurology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, Republic of
- 2251** **Optimizing EEG artifact removal pipelines in simultaneous EEG-fMRI recording of sensory evoked res**
Nasim Shams^{1,2}, Claude Alain^{2,1}, Stephen Strother^{2,1}
¹University of Toronto, Toronto, Canada, ²Rotman Research Institute, Baycrest, Toronto, Canada
- 2252** **Diagnosis of Glioma by means of Statistical Mapping of (IPA)- SPECT data**
Emilia Iannilli¹, Timm Ubben¹, Cornelia Hummel¹, Dirk Hellwig², Carl-Martin Kirsch², Samuel Sanmick², Thomas Hummel¹, Nasreddin Abolmaali³
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- 2253** **Investigating the relationship between local glucose consumption and global FC in the resting human**
Lukas Utz¹, Alexander Drzezga², Christian Sorg³, Valentin Riedl⁴
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- 2254** **Shared and task-specific brain mechanisms in different inhibition tasks: A concurrent EEG-fMRI study**
Anthony Schläpfer^{1,2}, Katya Rubia³, Daniel Brandeis^{1,2,4}
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- 2255** **DRIFTER-based physiological corrections to MREG vs. NIRS source correlations**
Vesa Korhonen¹, Tuija Hiltunen², Teemu Myllylä³, Vesa Kiviniemi¹
¹Department of Radiology, MRC, Oulu University Hospital, Oulu, Finland, ²Department of Clinical Neurophysiology, MRC, Oulu University Hospital, Oulu, Finland, ³Department of Optoelectronics and measurement techniques, Oulu University, Oulu, Finland
- 2256** **Does EEG help to identify the epilepsy-related spatial independent component of fMRI data?**
Martin Lamoš¹, Radek Marecek², Tomáš Slaviček¹, Martin Havlicek³, Jiří Jan¹
¹Department of Biomedical Engineering, Brno University of Technology, Brno, Czech Republic, ²Central European Institute of Technology, CEITEC, Masaryk University, Brno, Czech Republic, ³Maastricht University, Maastricht, Netherlands

- 2257** **Connectivity of the arcuate fasciculus predicts fMRI activations in presurgical language mapping**
György Homola¹, Saad Jbabdi², Christian Beckmann³, Andreas Bartsch⁴
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- 2258** **Source Concordance Analysis of Simultaneously Recorded Steady State Visual Evoked Potentials & fMRI**
Adil Deniz Duru¹, Zubeyir Bayraktaroglu², Elif Kurt³, Çiğdem Ulaşoğlu⁴, Dilek Göksel Duru⁵, Ahmet Ademoglu⁶, Tamer Demiralp⁷
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- 2259** **Comparing fMRI and MEG for Pre-surgical Language and Motor Mapping**
Tynan Stevens^{1,2}, Timothy Bardouille^{2,3}, David Clarke^{4,1,3}, Steven Beyea^{2,3,1}
¹Dalhousie University, Halifax, Canada, ²Biomedical Translational Imaging Centre (BIOTIC), Halifax, Canada, ³IWK Health Sciences Centre, Halifax, Canada, ⁴QEII Health Sciences Centre, Halifax, Canada
- 2260** **Relationship between ECoG phase-amplitude coupling and BOLD data in simultaneous ECoG-fMRI in humans**
Teresa Murta^{1,2}, Patrícia Figueiredo¹, Umair Chaudhary², David Carmichael³, Louis Lemieux²
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- 2261** **Gender difference of metabolic brain network with weighted structural connection**
Hyejin Kang¹, Youngmin Huh¹, Jarang Hahm¹, Yu-Kyeong Kim², Dong Soo Lee²
¹Seoul National University, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Seoul, Korea, Republic of
- 2262** **Cardiac cycle detection in EEG with residual MRI gradient artifact by multiple-scale peak detection**
Chung Ki Wong¹, Vadim Zotev¹, Han Yuan¹, Jerzy Bodurka^{1,2}
¹Laureate Institute for Brain Research, Tulsa, OK, ²College of Engineering, University of Oklahoma, Norman, OK
- 2263** **GABA and Glu levels correlation with intrinsic functional connectivity (iFC) of the visual system**
Katarzyna Bienkowska¹, Ulrich Pilatus², Valentin Riedl³
¹Institute of Neuroradiology, Technische Universität München, Munich, Germany, ²Institute of Neurology, Johann Wolfgang Goethe University, Frankfurt/Main, Germany, ³Technische Universität München, Munich, Germany
- 2264** **An fMRI and EEG Study of Epileptogenesis in a Rat Model of Focal Cortical Dysplasia**
Yinchen Song¹, Basavaraju Sanganahalli², Fahmeed Hyder², Wei-Chiang Lin¹, Jorge Riera Diaz¹
¹Florida International University, Miami, FL, ²Yale University, New Haven, CT
- 2265** **Pediatric Expressive Language Network Connectivity — Findings from fMRI-Constrained MEG**
Darren Kadis¹, Andrew Dimitrijevic¹, Claudio Toro Serey¹, Scott Holland¹
¹Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- 2266** **BOLD versus Gamma modulations during visual search: Linking intracranial EEG to fMRI at 3T and 7T**
Carolina Ciumas¹, Marcela Perrone-Bertolotti², Rosa Maria Sanchez Panchuelo³, Juan Vidal⁴, Susan Francis⁵, Tomas Ossandon⁶, Philippe Ryvlin⁷, Philippe Kahane⁸, Matthew Brookes³, Jean-Philippe Lachaux⁹, Karim Jerbi¹⁰
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- 2267 Electro-corticographic (ECoG) correlates of the default mode network**
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- 2268 Source localization of frequency-tagged signatures of binocular rivalry from simultaneous EEG-fMRI**
Abhrajee Roy¹, Keith Jamison¹, Stephen Engel¹, Sheng He¹, Bin He¹
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NON-BOLD FMRI

- 2269 Resting-state dynamic causal modelling enables accurate disease classification**
Timothy Ham¹, Timothy Rittman¹, Ian Coyle-Gillchrist¹, Susannah Brain¹, Charlotte Rae², Zheng Ye¹, P. Simon Jones¹, James Rowe¹
¹University of Cambridge, Cambridge, United Kingdom, ²MRC Cognition and Brain Sciences Unit, Cambridge, United Kingdom
- 2270 The impact of O2 concentration on the reproducibility of CMRO2 estimation with calibrated MRI**
Isabelle Lajoie¹, Felipe Tancredi¹, Richard Hoge¹
¹University of Montreal, Montreal, Canada
- 2271 Association of rCBF and structural voxel classification (VBM) values across individuals**
Roberto Viviani^{1,2}
¹University of Ulm, Ulm, Germany, ²University of Innsbruck, Innsbruck, Austria
- 2272 Investigation of regional changes in CBF and vascular reactivity in cardiac disease patients**
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- 2273 Detection of Inter-Sessional Functional Activation by Arterial Spin Labeling**
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- 2274 Spatial distribution of task-evoked superficial signals in functional near infrared spectroscopy**
Satoru Kohno¹, Yoko Hoshi¹
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- 2275 Classification of prefrontal and motor cortex activities for development of three-class fNIRS-BCI**
Noman Naseer¹, Keum-Shik Hong¹, Muhammad Jawad Khan¹, Muhammad Raheel Bhutta¹
¹Pusan National University, Busan, Korea, Republic of
- 2276 Physiological de-noising of functional NIRS data by means of wavelet coherence analysis**
Evgeniya Kirilina¹, Na Yu², Alexander Jelzow³, Heidrun Wabnitz³, Arthur Jacobs¹, Ilias Tachtsidis²
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- 2277 Adaptive Mechanism for Brain Functional Response Estimation in fNIRS Signal**
Muhammad Ahmad Kamran¹, Malik Muhammad Naeem Mannan¹, Keum-Shik Hong¹
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- 2278 Classification of lie and truth in forced choice paradigm: an fNIRS study**
Muhammad Raheel Bhutta¹, Keum-Shik Hong¹, Noman Naseer¹, Muhammad Jawad Khan¹
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- 2279 Multi-Decision Detection Using EEG-NIRS Based Hybrid Brain-Computer Interface (BCI)**
Muhammad Jawad Khan¹, Keum-Shik Hong¹, Noman Naseer¹, Muhammad Raheel Bhutta¹
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- 2280 Functional Lateralization of Music Processing with Noise in the Auditory Cortex: An fNIRS Study**
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- 2281 Modeling the Hemodynamic Response to an Impulse Stimulus Measured by fNIRS**
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- 2282 Decoding Brain Activation in fNIRS Signal using Recursive Algorithm**
Malik Muhammad Naeem Mannan¹, Muhammad Ahmad Kamran¹, Keum-Shik Hong¹
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- 2283 Sub-millimeter resting state functional connectivity within the mammalian primary visual cortex**
Anil Vasireddi¹, Alberto Vazquez², David Whitney³, Apostolos Georgopoulos⁴, Seong-Gi Kim⁵
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- 2284 Activation of the right prefrontal cortex during left curve driving: a vector-based fNIRS study**
Noriyuki Oka¹, Kayoko Yoshino¹, Kouji Yamamoto², Hideki Takahashi³, Yoshitomo Orino², Shuguang Li⁴, Toshiyuki Sugimachi⁴, Shigeyuki Yamabe⁵, Kimihiko Nakano⁴, Yoshihiko Tabuchi⁴, Yoshihiro Suda⁴, Toshinori Kato¹
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- 2285 Prefrontal activation of caregivers in the training process of touching: a vector-based fNIRS study**
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- 2286 A vector-based model of geometric relationships between oxygen saturation and hemodynamic indices**
Toshinori Kato¹
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- 2287 Distance-based conversion of time-series functional brain monitoring data in an outdoor study**
Kayoko Yoshino¹, Noriyuki Oka¹, Kouji Yamamoto², Hideki Takahashi³, Toshinori Kato¹
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- 2288 Ipsilateral functional deactivation to unilateral sensorimotor tasks measured with fMRI and NIRS/DOT**
Frances Robertson¹, Tania Douglas¹, Annerine Roos², Dan Stein¹, Ernesta Meintjes¹
¹University of Cape Town, Cape Town, South Africa, ²Stellenbosch University, Cape Town, South Africa
- 2289 Developmental Changes in Resting-State Functional Connectivity**
Zih-Yun Yang¹, Hsin-Chin Chen¹
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Frank Fishburn¹, Megan Norr², Andrei V. Medvedev³, Chandan Vaidya²
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- 2291 A study of multiple brain activities during cooperative work by simultaneous fNIRS measurements**
Utako Yamamoto¹, Mao Goto², Hisatake Yokouchi³, Tomoyuki Hiroyasu⁴
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- 2292 A Near infrared spectroscopy study on Subliminal Perception**
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- 2293 Identification of scalp blood flow in NIRS data based on the transfer entropy**
MASAKO SUGAI¹, MASAHARU ADACHI¹
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- 2294 Stroop Interference Effect with Functional Near-Infrared Spectroscopy (fNIRS) in Healthy Subjects**
Handan Noyan¹, Müge Aslankara², Sinem Erdoğan³, Miray Erbey⁴, Deniz Büyükgök⁵, Bilge Togay⁶, Ata Akin⁷, Alp Üçok⁶
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- 2295 Cross-modal plasticity in early-blind adults: a functional near-infrared spectroscopy study**
Olivia Florea^{1,2}, Julie Tremblay², Mélanie Lefrançois², Phetsamone Vannasing², Mathieu Dehaes^{2,3}, Maryse Lassonde^{1,2}, Franco Lepore^{1,2}
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- 2296 The direct brain hemodynamic imaging of pig by functional Near-infrared Cortical Imaging (fNCI)**
Minako Uga^{1,2}, Toshiyuki Saito^{3,1}, hidenori yokota¹, keiji oguro¹, Rizki Edmi¹, Tsutomu Mizutani¹, Ippeita Dan^{2,1}, EIJU WATANABE^{1,2}
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- 2297 Neuronal correlates of rule learning revealed by near-infrared spectroscopy**
Matthias Witte¹, Silvia Kober¹, Manuel Ninaus¹, Christa Neuper^{1,2}, Guilherme Wood¹
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- 2298 Confirmation of involvement of Wernicke's area in inner speech using fNIRS**
Branislava Curcic-Blake¹, Koriën Leemhuis², Natasha Maurits³, Evgeniya Kirilina⁴, Rudie Kortekaas⁵, A. Aleman⁶
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- 2299 Brain hemodynamic response and functional connectivity during encoding and retrieval in newborns**
Silvia Benavides-Varela^{1,2,3}, Roma Siugzdaite⁴, David Gomez^{5,6}, Francesco Macagno⁷, Luigi Cattarossi⁷, Jacques Mehler⁵
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- 2300 Separating ventral and dorsal axes of the rostro-caudal hierarchy in the lateral prefrontal cortex**
F. Konrad Schumacher^{1,2,3}, Björn Schelter^{4,2,3}, Benjamin Rahm⁵, Lena Koestering^{1,2,6}, Kai Nitschke^{1,2,6,3}, Josef Unterrainer⁵, Cornelius Weiller^{1,2,3}, Christoph Kaller^{1,2,3}
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- 2301 Clinical Decision Making: Does Prefrontal Cortex Engagement Vary with Expertise and Task Difficulty?**
Kunal Shetty¹, Daniel Leff¹, Felipe Orihuela-Espina^{1,2}, Shusuke Yasuura¹, Kumuthan Srisankarajah¹, Rebecca Dunne¹, Javier Andreu-Perez¹, Professor Ara Darzi¹, Professor Guang-Zhong Yang¹
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- 2302 Impact of the different degree of attention to the auditory and visual stimuli**
Utako Yamamoto¹, Akane Kimura², Hisatake Yokouchi³, Tomoyuki Hiroyasu⁴
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- 2303 Examination of the proficiency level on skill acquisition using cerebral blood flow changes**
Utako Yamamoto¹, Atsuko Hayakawa², Hisatake Yokouchi³, Tomoyuki Hiroyasu⁴
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- 2304 Gender difference in performance and brain function during memorizing task under influence of sound**
Utako Yamamoto¹, Ayame Masazumi², Hisatake Yokouchi³, Tomoyuki Hiroyasu⁴
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- 2305 Dynamic characteristics of resting-state functional connectivity: an fNIRS study**
Zhen Li^{1,2,3}, Jingping Xu^{1,2,3}, Lin Yuan^{1,2,3}, Yong He^{1,2,3}, Haijing Niu^{1,2,3}
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- 2306 Detection of Fast Optical Signal Changes in Interictal Spikes in Rats**
Mana Manoochhehi¹, Mahdi Mahmoudzadeh², Victoria Osharina¹, Fabrice Wallois³
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- 2307 Signal improvement in multichannel NIRS by channel redundancy over the optode/tissue interfaces**
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- PET**
- 2308 Simultaneous investigation of regional CBF and glucose metabolism with 3D- pCASL and 18[F]-FDG**
Udunna Anazodo^{1,2}, Tracy Ssali^{3,2}, Jonathan Mandel⁴, John Butler¹, Matthias Gunther⁵, Frank Prato^{1,2}, Thompson Terry^{1,2}, Keith St Lawrence^{1,2}
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- 2309 Neuroinflammation in PD patients expressing a polymorphism for high-affinity binding for [18F]-FEPPA**
Yuko Koshimori^{1,2}, Ji Hyun Ko³, Rostom Mabrouk¹, Leigh Christopher^{1,2}, Romina Mizrahi¹, Pablo Rusjan¹, Anthony Lang⁴, Alan Wilson¹, Sylvain Houle¹, Antonio Strafella^{1,4,2}
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- 2310 The norepinephrine transporter in ADHD quantified by PET in vivo**
Thomas Vanicek¹, Marie Spies¹, Christina Rami-Mark², Markus Savli¹, Anna Höflich¹, Georg Kranz¹, Andreas Hahn¹, Markus Mitterhauser², Wolfgang Wadsak², Marcus Hacker², Siegfried Kasper¹, Rupert Lanzenberger¹
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- 2311 Hypermetabolism of contralesional hemisphere on F18 FDG PET/CT in full territory MCA infarct**
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Learning and Memory

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- 2312 The influence of encoding context on memory detection with an fMRI-based Concealed Information Test**
Judith Peth¹, Matthias Gamer¹
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- 2313 Assessment of Sex Differences in Material Specific Encoding in young healthy subjects**
Yuka Morikawa¹, Michael Zitzmann², Lena Zeisner¹, Bettina Pfeleiderer¹
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- 2314 Dissociating Mesial Diencephalic Structures versus Cerebellum Contributions to Associative Learning**
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- 2315 The occipito-temporal cortex supports weighting of cue evidence during probabilistic learning**
Valérie Zufferey¹, Stanislaw Adaszewski¹, Sandrine Muller¹, Jing Cui¹, Bogdan Draganski¹, Ferath Kherif¹
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- 2316 Recognition memory is associated with hippocampal volume**
David Coyne¹, Leo Gschwind¹, Annette Milnik¹, Klara Spalek¹, Andreas Papassotiropoulos¹, Dominique de Quervain¹
¹University of Basel, Basel, Switzerland
- 2317 Sleep-dependent Memory Consolidation and Schemas**
Nora Hennes¹, James Cousins¹, Matthew Lambon Ralph¹, Penelope Lewis¹
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- 2318 Metabolic cerebral correlates of conjunctive and relational memory in Alzheimer's disease**
Christine Bastin¹, Mohamed Ali Bahri², Fabienne Collette¹, Sarah Genon¹, Jessica Simon³, Bénédicte Guillaume⁴, Rachel Diana⁵, Andy Yonelinas⁶, Eric Salmon¹
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- 2319 Right TPJ and STS process different aspects of irrelevant distractor-stimuli during memory retrieval**
Sze Chai Kwok¹, Emiliano Macaluso¹
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- 2320 Neural correlates of episodic retrieval in aging: impact of executive functions and task difficulty**
Fabienne Collette¹, Christine Bastin¹, Sarah Genon¹, Eric Salmon¹, Fay Séverine², Isingrini Michel³, Lucie Angel⁴
¹Cyclotron Research Centre, LIEGE, Belgium, ²François Rabelais University, Tours, France, ³François-Rabelais University, Tours, France, ⁴François-Rabelais University, TOURS, France
- 2321 The electrophysiological correlates of distinctiveness processing which contribute to immediate EEM**
Gemma Barnacle¹, Dimitris Tsivilis¹, Deborah Talmi¹
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- 2322 The functional relevance of different prestimulus oscillatory activity for memory formation**
Michael Rose¹
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- 2323 Dentate gyrus/CA3 activity during encoding is correlated with aerobic fitness in young adults**
Andrew Whiteman¹, Matthew Dunne², Randall Newmark¹, Rachel Nauer¹, Chantal Stern¹, Karin Schon²
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- 2324 Spatial pattern separation and completion in human hippocampal subfields**
Paula Vieweg¹, Thomas Wolbers¹
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- 2325 Characterizing spiking properties of human nucleus accumbens neurons and their responses to novelty**
Marijn Kroes¹, Fernando Lopez-Sosa¹, Josue Avecillas², Victoria Acedo³, Mercedes Gonzalez-Hidalgo⁴, JJ Lopez-Ibor⁶, Francesco Battaglia⁶, Juan Barcia⁷, Bryan Strange¹
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- 2326 The Role of the Ventral Striatum in Recognition Memory**
Mareike Clos¹, Ulrike Schwarze¹, Sebastian Gluth², Nico Bunzeck³, Tobias Sommer⁴
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- 2327 Corticothalamic Theta and Theta-Gamma Synchrony Underlie Human Memory Formation**
Catherine Sweeney-Reed¹, Tino Zaehle¹, Juergen Voges², Friedhelm Schmitt¹, Lars Buentjen¹, Klaus Kopitzki², Christine Esslinger¹, Hermann Hinrichs³, Robert Knight⁴, Hans-Jochen Heinze³, Alan Richardson-Klavehn¹
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- 2328 Surface-based searchlight mapping of cross-modal semantic responses using high-resolution fMRI**
Irina Simanova¹, Peter Hagoort¹, Robert Oostenveld¹, Marcel van Gerven¹
¹Donders Institute, Nijmegen, Netherlands
- 2329 Electrophysiological Properties of Correct And Incorrect Face-Name Recognition**
Metehan Irak¹, Cansin Özgör¹, Can Soylu¹
¹Bahcesehir University Brain and Cognition Research Laboratory, Istanbul, Turkey
- 2330 Electrophysiological correlates of voice learning and recognition**
Romi Zäske^{1,2}, Gregor Volberg^{3,4}, Stefan Schweinberger^{1,2}
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- 2331 Intracranial recordings of adaptive anterior human hippocampal oscillatory responses to novelty**
Mar Yebra¹, Stephan Moratti², Constantino Mendez-Bertolo¹, Rafael Toledano³, Antonio Gil-Nagel³, Bryan Strange¹
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- 2332 Distinct slow and fast theta dynamics in episodic memory retrieval**
Bernhard Pastötter¹, Karl-Heinz Bäuml¹
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- 2333 The neural signature of the own-age bias in face memory: Effects of contact and motivation**
Holger Wiese¹, Jessica Komes¹, Stefan Schweinberger²
¹Friedrich Schiller University, Jena, Germany, ²Department for General Psychology and Cognitive Neuroscience, Friedrich Schiller University of Jena, Jena, Germany
- 2334 Forgetting across a week: Structural brain correlates of forgetting in old age**
Sandra Duezel¹, Simone Kühn¹, Emrah Düzel², Ulman Lindenberger¹
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- 2335 The learning affected neural signal changes in FFA and its influence of ACC**
Hyo Woon Yoon¹, Uk-Su Choi², Chang-Hee Lee¹, Kyung-Soon Park¹
¹Daegu Cyber University, Daegu, Korea, Republic of, ²Gachon University, Incheon, Korea, Republic of
- 2336 Hippocampus is important in vivid association recognition at remote time point**
Summer Zhan¹
¹Psychology department of Peking University, Beijing, China
- 2337 The BDNF Val66Met polymorphism affects encoding of object locations during active navigation**
Joost Wegman^{1,2}, Anna Tyborowska^{1,2}, Martine Hoogman³, Alejandro Arias-Vásquez⁴, Gabriele Janzen^{1,2}
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- 2338 The role of hippocampus in successful memory retrieval**
Hweeling Lee¹, Paul Messing-Flöter^{1,2}, Nikolai Axmacher^{2,1}
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- 2339 Exploring the role of episodic and semantic neural networks in Self-Generated Thought**
Florence Ruby¹, Krzysztof Gorgolewski², Elizabeth Jefferies¹, Daniel Margulies², Jonathan Smallwood¹
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- 2340 Spatiotemporal Pattern Similarity Predicts Subsequent Memory**
Yi Lu^{1,2}, ChangMing Wang^{3,1,2}, Gui Xue^{1,2}
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- 2341 Functional and structural changes associated with mnemonic control**
Garikoitz Lerma-Usabiaga¹, Lorna Garcia Penton¹, Silvia Bunge², Manuel Carreiras¹, Pedro Paz-Alonso¹
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- 2342 Eight Weddings and six Funerals: an fMRI study on true and false autobiographical memories**
Francesca Benuzzi¹, Daniela Ballotta¹, Micaela Zucchelli¹, Maria Angela Molinari², Giacomo Handjaras³, Emiliano Ricciardi³, Pietro Pietrini^{4,3}, Paolo Nichelli¹
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- 2343 Prefrontal — hippocampal oscillatory interactions associated with directed forgetting**
Carina Oehm¹, Conrad Baumann¹, Juergen Fell¹, Simon Hanslmayr², Marcin Leszczynski¹, Amirhossein Jahanbeka¹, Anne Do Lam¹, Christian Elger¹, Nikolai Axmacher^{1,3}
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- 2344 The neural substrates of familiarity memory for abstract and concrete words**
Alex Kafkas¹, Daniela Montaldi¹, Andrew Mayes¹
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- 2345 7T fMRI of SN/VTA, locus coeruleus & hippocampus during emotional & reward-related memory encoding**
Anne Maass¹, David Berron¹, Matthew Betts², Hartmut Schütze¹, Emrah Düzel¹
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- 2346 Memory Consolidation of Landmarks: An fMRI study**
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- 2347 Sleep-dependent memory consolidation in insomnia — A long-term study**
Manuel Schabus¹, Hermann Griessenberger², Dominik P.J. Heib², Daniel Koerner², Malgorzata Wislowska², Kerstin Hoedlmoser¹
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- 2348 The Critical Role of Encoding Processes for Proactive Interference**
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²Regensburg University, Regensburg, Germany
- 2349 A Refreshing Experiment — Repetition Effects on Recognition Memory**
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²University of Surrey, Guildford, United Kingdom
- 2350 Investigating the effects of an experimentally induced schema on memory**
Garvin Brod¹, Ulman Lindenberger¹, Yee Lee Shing¹
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Wilburn Reddick¹, John Glass¹, Jung Won Hyun², Yimei Li², Stanley Pounds², Larry Kun¹, Ching-Hon Pui³, Melissa Hudson⁴, Leslie Robison⁴, Kevin Krull⁴, Gregory Armstrong⁴
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- 2352 Thinking outside the box: Neural correlates of learning by insight**
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- 2353 Memory Capacity Influences Overnight Consolidation of Declarative Material**
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- 2354 The neural mechanisms of spacing effect in episodic memory: A parallel EEG and fMRI study**
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- 2355 Identifying objects at different levels of specificity: cortical dynamics in hub and spokes**
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²Northumbria University, Newcastle, United Kingdom,
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- 2356 Neuronal correlates of self-initiated semantic encoding strategies in episodic memory**
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- 2357 Physical activity alters functional connectivity during memory encoding**
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- 2358 Dissociating the roles of the anterior and mediodorsal thalamic nuclei in human memory**
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- 2359 Brain Networks Related to Beta Oscillatory Activity During Episodic Memory Retrieval**
Erika Nyhus^{1,2}, Christopher Gagne², David Badre²
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- 2360** **Monitoring the growth of the neural representation of an individual novel natural concept**
Andrew Bauer¹, Marcel Just²
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- 2361** **Inferior parietal and right frontal contributions to trial-to-trial dynamics of memory retrieval**
Jasmin Kizilirmak¹, Frank Rösler², Siegfried Bien³, Patrick Khader⁴
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- 2362** **Developmental differences in the anterior and posterior medial temporal lobe during memory formation**
Lingfei Tang¹, Carson Miller Rigoli¹, Ishan Patel¹, Nikhil Adapa¹, Qijing Yu¹, Noa Ofen¹
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- 2363** **An exploratory analysis of event-related face-name associative memory encoding task**
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- 2364** **Theta oscillations reflect memory representations in a virtual environment**
Monika Schönerauer¹, Sarah Frankenthal¹, Steffen Gais¹
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- 2365** **Human Place Learning: Training Induced Neural Plasticity**
Janneke van Ekerdt¹, Cansu Oranc¹, Gabriele Janzen¹
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- 2366** **Functional Modules of Cross-Time and Frequency Power in Attentional Control over Memory Encoding**
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¹Seoul National University, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Seoul, Korea, Republic of
- 2367** **Hippocampus and Striatum: Action-related Competition and the Long-term Fate of Episodic Memories**
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- 2368** **A combined language-memory fMRI paradigm to assess cerebral networks**
Monica Baciú¹, Marcela Perrone-Bertolotti¹, Thomas Hueber², Emilie Cousin¹, Cedric Pichat¹, Nazhia Bendiremad¹, Lorella Minotti³, Alexandre Krainik⁴, Philippe Kahane³
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- 2369** **The Evolution of Short-Term Plasticity in the Rat Hippocampus**
Shir Hofstetter¹, Yaniv Assaf¹
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- 2370** **Methylation Status of Growth-factor Genes Predicts Handedness Associated Cortical Asymmetry**
Leon French¹, Doretta Caramaschi², Erin W Dickie³, Gabriel Leonard⁴, Michel Perron⁵, G. Bruce Pike⁶, Louis Richer⁵, Suzanne Veillette⁵, Pingzhao Hu⁷, Eva Reischl⁸, Melanie Waldenberger⁸, Sonja Zeilinger⁸, Tom Gaunt⁹, Wendy McArdle⁹, Susan Ring⁹, Geoff Woodward⁹, John Evans¹⁰, George Davey-Smith⁹, Caroline Relton⁹, Zdenka Pausova¹¹, Tomas Paus¹²
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- 2371** **Rapid Remyelination in the Human Brain**
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- 2372 Genetically induced diffuse impairment of retinal ganglion cells is linked to extrastriate cortical plasticity**
Miguel Castelo-Branco^{1,2}, Catarina Mateus¹, Otilia d'Almeida¹, Aldina Reis³, Eduardo Silva^{3,4}
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- 2373 Enhanced Functional Connectivity of Insular Subregions in Elite Cyber Sportsman**
Hui He¹, Diankun Gong¹, Dongbo Liu¹, weiyi Ma¹, Shipeng Tu¹, Dan Zhang¹, Li Dong¹, Cheng Luo¹, Dezhong Yao¹
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- 2374 MR diffusion measures of training induced changes in the human somatosensory cortex**
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- 2375 BOLD response and functional connectivity as indicators of plasticity in working memory in aging**
Stephan Heinzel¹, Christine Stelzel², Robert C. Lorenz³, Wolf-R. Brockhaus², Henrik Walter², Andreas Heinz⁴, Norbert Kathmann⁵, Michael Rapp¹
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- 2376 Effects of Neurofeedback on Inhibitory Control in ADHD-Patients**
Sarah Baumeister¹, Sarah Hohmann¹, Isabella Wolf^{1,2}, Nathalie Holz¹, Regina Boecker¹, Michael Plichta³, Matthias Ruf², Martin Holtmann⁴, Tobias Banaschewski¹, Daniel Brandeis^{1,5,6,7}
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- 2377 Cognitive Stimulation Regulates Functional Connectivity in Mild Cognitive Impairment**
Matteo De Marco¹, Jessica Rigon², Cristina Pilosio², Francesca Meneghello², Annalena Venneri¹
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- 2378 Dynamic microstructural changes responsible for motor recovery**
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- 2379 Early Signs of Neuronal Plasticity following Brachial Plexus Avulsion**
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- 2380 Brain Plasticity: Timing of Training-induced Gray Matter Changes**
Elisabeth Wenger¹, Simone Kühn¹, Julius Verrel¹, Johan Mårtensson¹, Ulman Lindenberger¹, Martin Lövdén^{2,1}
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- 2381 Cross auditory-spatial learning between early- and late-blind individuals: An fMRI study**
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- 2382 Neurofeedback-related morphological changes of the brain**
Manuel Ninaus¹, Silvia Kober², Matthias Witte², Christa Neuper², Guilherme Wood²
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- 2383 Cortical correlates of somatosensory plasticity transfer from the finger to the lips in human S1**
Dollyane Muret^{1,2}, Roberto Martuzzi^{3,4}, Hubert Dinse⁵, Karen Reilly^{1,2}, Alessandro Farnè^{1,2}, Olaf Blanke^{3,4,6}
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- 2384 Motor compensation of hemispheric lesions**
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Ahmad Amini^{1,2}, Florian Fischmeister¹, Dara O Hogain¹, Eva Matt¹, Alexander Geißler¹, Robert Schmidhammer³, Frank Rattay², Roland Beisteiner¹
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- 2386 When Iron can be scanned: effects of Iron-triathlon competition on brain functional connectivity**
Claudio Gentili¹, Domenico Montanaro², Danilo Menicucci³, Remo Bedini^{4,3}, Alessandro Pingitore^{3,5}, Antonio L'Abbate^{3,5}, Pietrini Pietro⁶, Angelo Gemignani^{1,5}
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- 2387 Reshaping Brain Networks for Superior Memory**
William Shirer¹, Michael Greicius¹, Boris Konrad², Philipp Schuster², Sarah Weisig², Michael Czisch², Martin Dresler²
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- 2388 Effective coupling: Working memory training related changes in task-related neural activity and rest**
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- 2389 Cortical Morphology altered by Behavioural Therapy in Children with FASD**
Jason Lerch¹, Kelly Nash², Sara Stevens², Anne Morris¹, Jovanka Skocic¹, Joanne Rovet¹
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- 2390 FMRI evaluation of visual, auditory, and motor cortex in visually impaired and sighted judo athletes**
Catarina Correia¹, Nuno Martins², Margarida Ribeiro¹, Hugo Ferreira³
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- 2391** **Peripheral Motor Neuropathy changes functional connectivity of Sensory Motor Network in Human Brain**
Abdalla Zein Elabdein Mohammed¹, Seulgi Eun¹, Jeungchan Lee¹, Chuanfu Li², Kyungmo Park¹, Yuanyuan Wu², Jun Yang², Yifang Zhu²
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- 2392** **Tai Chi Chuan modulates the feasibility of fronto-parietal network**
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- 2393** **Peripheral Motor Neuropathy changes functional connectivity of Default Mode Network in Human Brain**
Abdalla Zein Elabdein Mohammed¹, Jun Yang², Jeungchan Lee¹, Seulgi Eun³, Chuanfu Li², Yifang Zhu², Yuanyuan Wu², Kyungmo Park³
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- 2394** **Subject Variability of Motor Reorganization in Stroke Rehabilitation**
Shang-Hua Lin¹, Po-Ting Lin², Si-huei Lee³, Shih-Ching Yeh⁴, Yi-Yun Yang³, Ching-Po Lin¹, Changwei W. Wu²
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SKILL LEARNING

- 2395** **Physical activity impacts hippocampus and white matter: A longitudinal MRI and serum marker study**
Karsten Mueller¹, Harald Möller¹, Franziska Busse¹, Annette Horstmann^{1,2}, Jöran Lepsien¹, Matthias Schroeter^{1,3}, Matthias Blüher^{4,2}, Michael Stumvoll^{4,2}, Arno Villringer^{1,2,3}, Burkhard Pleger^{1,3}
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- 2396** **Strategy vs. Action Game: Cognitive and brain volume predictors of game learning**
Chandramallika Basak¹, Xi Chen¹, Margaret O'Connell¹, Kaoru Nashiro¹, Melissa Druskis¹
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- 2397** **Resting State Connectivity Predicts Implicit Learning Performance: A Replication and Extension**
Chelsea Stillman¹, Xiaozhen You¹, Anna Greenwald¹, Eileen Rasmussen¹, Chandan Vaidya¹, R. Turner², David Madden³, James Howard Jr.⁴, Darlene Howard¹
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- 2398** **10 Hz tACS during motor sequence learning inhibits short-term retrieval**
Vanessa Krause¹, Ann-Christin Boysen¹, Bettina Pollok¹
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- 2399** **Functional and structural neuroplasticity of learning Morse code**
Lara Schlaffke¹, Naima Rüther², Stefanie Heba¹, Martin Tegenthoff¹, Christian Bellebaum³, Tobias Schmidt-Wilcke¹
¹University Hospital Bergmannsheil, Neurology, Bochum, Germany, ²Ruhr-Universität Bochum, Neuropsychology, Bochum, Germany, ³Heinrich Heine University, Psychology, Düsseldorf, Germany
- 2400** **Cortico-cerebellar connectivity mediates implicit motor sequence learning — A DCM study**
Elinor Tzvi¹, Anne Stoldt², Thomas Münte¹, Karsten Witt², Ulrike Krämer¹
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- 2401 Training of Dance Video Game Changes Brain Activity Related to Audio-visual Integration**
Yasunori Nomoto¹, Jack Noah², Atsumichi Tachibana³, Shaw Bronner⁴, Sotaro Shimada¹, Yumie Ono¹
¹Meiji University, Kawasaki, Japan, ²Yale University, New Haven, CT, ³Seijoh University, Tokai, Japan, ⁴Northeastern University, Boston, MA
- 2402 Characterization of cognitive capability of Air Traffic Controller: an fMRI study**
Makoto Takahashi¹, Hisae Aoyama², Kiyokazu Haga³, Ryuta Kawashima⁴, Atsushi Sekiguchi⁵, Naoki Miura⁶, Daisuke Karikawa²
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- 2403 Immobilization of adjacent fingers boosts learning and specifically changes muscles representations**
Estelle Raffin¹, Axel Thielscher^{1,2,3}, Hartwig Siebner^{4,5}
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- 2404 Novel Gesture Learning Demonstrates Progressively Restricted Topographical Representation on EEG**
Joshua Ewen¹, Balaji Lakshmanan², Katarina Ament², Jaroslaw Harezlak³, Anna Korzeniewska⁴, Nathan Crone⁴, Stewart Mostofsky⁵
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- 2405 The specificity of dance versus music training on gray matter structure**
Falisha Karpati^{1,2}, Chiara Giacosa^{1,3}, Virginia Penhune^{1,3}, Nicholas Foster^{1,4}, Krista Hyde^{1,4,2}
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- 2406 Correlated effects of practice on brain activity and performance**
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- 2407 It is not always bad to be imagining things. On the role of motor imagery ability in motor learning**
Anja Ischebeck¹, Cornelia Neururer¹, Karl Koschutnig¹, Gernot Reishofer², Franz Ebner², Christa Neuper¹
¹University of Graz, Graz, Austria, ²Medical University of Graz, Graz, Austria
- 2408 A longitudinal fMRI investigation of simultaneous interpretation training**
Alexis Hervais-Adelman¹, Barbara Moser-Mercer², Narly Golestaani¹
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- 2409 Offline increment of striatal activity associated with sleep-dependent improved accuracy**
Sho Sugawara¹, Takahiko Koike¹, Hiroaki Kawamichi², Kai Makita¹, Yuki Hamano^{1,3}, Haruka Takahashi^{1,3}, Eri Nakagawa⁴, Hideaki Yamazaki-Kindaichi^{1,3}, Norihiro Sadato^{1,3}
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- 2410 Guidance and Learning of Circular Eye Movements**
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- 2411 Impact of a Short Character-Sound Training on the Visual N1 ERP in Healthy Adults**
Silvia Brem¹, Eliane Hunkeler², Markus Maechler³, Jens Kronschnabel⁴, Ulla Richardson⁵, Daniel Brandeis⁶
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2412 Age-related decline in experience-dependent sensorimotor plasticity: A MEG study

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2413 Cerebellar and Ventral Striatal Changes during Oculomotor Rule Learning

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2414 R & B: Rhythm Learning in the Brain

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2415 Short-term learning relates to connectivity and efficiency of resting-state functional networks

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2416 Acquisition of a non-sequential visuomotor expertise with extended practice

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2417 White Matter Integrity Correlates of Motor Sequence Consolidation in Young and Older Adults

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2418 On-line, off-line, and sleep dependent consolidation of motor sequence learning revealed by fMRI

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2419 Influence of associative search training on EEG spectral power in different periods of training

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WORKING MEMORY**2420 Violation of Anticipatory Set in Working Memory: A Multivariate Analysis of fMRI Responses**

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2421 Cr/PCr level in left hippocampus and memory in healthy people of older age

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2422 A Location of the Frontal/insula Network Function in the Resting-state

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2423 Examining the relationship of neural measures of working memory with academic skills in children

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2424 DRD2/ANKK1 polymorphism modulates the effect of ventral striatal BOLD on working memory performance

Charlotte Nymberg¹
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- 2425 Distractor inhibition training improves working memory by reducing unnecessary storage activity**
Marlen Schmicker¹
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- 2426 Parametric alpha- and beta-band signatures of supramodal numerosity information in working memory**
Bernhard Spitzer¹, Sebastian Fleck¹, Felix Blankenburg^{1,2}
¹Freie Universität Berlin, Berlin, Germany, ²Max Planck Institute for Human Development, Berlin, Germany
- 2427 Investigation of age-related changes in BOLD signals during the divergent task switch paradigm**
Mitsunobu Kunimi¹, Sachiko Kiyama¹, Toshiharu Nakai¹
¹National Center for Geriatrics and Gerontology, Aichi, Japan
- 2428 Hierarchies of cross-frequency phase synchronization during human visual working memory maintenance**
Felix Siebenhüner¹, Matias Palva¹, Satu Palva¹
¹Neuroscience Center, University of Helsinki, Helsinki, Finland
- 2429 Focused attention predicts neural patterns during working memory**
Steve Majerus¹, Nelson Cowan², Christophe Phillips³, Jessica Schrouff⁴
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- 2430 ECoG Evidence for Anterior-Posterior Hippocampal Dissociative Processing during Navigational Memory**
Isabel Catarina Duarte¹, Joao Castelano², Francisco Sales³, Miguel Castelo-Branco⁴
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- 2431 The Slow Component of Emotional Proactive Interference and Adaptation of Cortical Coding**
Irene Messina¹, Lisa Dommes², Petra Beschner³, Roberto Viviani²
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- 2432 Postpartum Cognitive Deficiency and its related Functional Connectivity**
Soo-Young Park¹, Na-Young Shin², Sehyun Yi¹, Sanghoon Han¹, Seung-Koo Lee²
¹Yonsei University, Seoul, Korea, Republic of, ²Yonsei University College of Medicine, Seoul, Korea, Republic of
- 2433 fMRI pattern analysis of working memory representations in auditory and visual cortex**
Viljami Salmela¹, Emma Salo¹, Olli Salonen², Kimmo Alho³
¹Institute of Behavioural Sciences, University of Helsinki, Helsinki, Finland, ²Helsinki Medical Imaging Center, Helsinki University Central Hospital, Helsinki, Finland, ³Helsinki Collegium for Advanced Studies, University of Helsinki, Helsinki, Finland
- 2434 Variability can be your friend — but only when flexibility is needed**
Diana Armbruster-Genc^{1,2}, Kai Ueltzhöffer^{1,2}, Christian Fiebach^{1,2,3}
¹Department of Psychology, Goethe University, Frankfurt am Main, Germany, ²Bernstein Center for Computational Neuroscience, University of Heidelberg, Heidelberg, Germany, ³IDeA Center for Individual Development and Adaptive Education, Frankfurt am Main, Germany
- 2435 Decoding rotation-invariant and rotation-specific representations in working memory**
Thomas Christophel¹, Carsten Alfeld¹, Christian Endisch², John-Dylan Haynes¹
¹BCCN, Berlin, Germany, ²Charité Universitätsmedizin, Berlin, Germany
- 2436 Domain-general network functional connectivity with domain-specific brain regions for working memory**
Ngoc Jade Thai¹, Tim Wright¹, Jamila Andoh², Iain Gilchrist¹, Christopher Jarrold³
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- 2437 Temporal unpredictability in a stimulus sequence affects brain activation depending on task demands**
Georgia Koppe¹, Bernd Gallhofer², Harald Gruppe², Gebhard Sammer², Peter Kirsch¹, Stefanie Lis¹
¹Central Institute of Mental Health, Mannheim, Germany, ²Justus Liebig University, Giessen, Germany

- 2438** **Fronto-parietal gamma-band activity is modulated by working memory training**
Helene Gudi¹, Johanna Rimmele², Niels Kloosterman³, Tobias Donner³, Andreas Engel², Brigitte Röder⁴
¹Biological Psychology and Neuropsychology, University of Hamburg, Hamburg, Germany, ²University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ³Department of Psychology, University of Amsterdam, Amsterdam, Netherlands, ⁴Biological Psychology and Neuropsychology, University of Hamburg, Germany, Hamburg, Germany
- 2439** **Involvement of the ventral striatum in working memory: selective maintenance of complex stimuli**
Alexa Haeger^{1,2}, HweeLing Lee², Juergen Fell¹, Nikolai Axmacher^{1,2}
¹Dept. of Epileptology, Univ. of Bonn, Bonn, Germany, ²German Center for Neurodegenerative Diseases (DZNE), Bonn, Germany
- 2440** **Periodic switching between memory activation and representation tuning in the human hippocampus**
Marcin Leszczynski¹, Juergen Fell¹, Nikolai Axmacher¹
¹Dept. of Epileptology, Univ. of Bonn, Bonn, Germany
- 2441** **Relationship between Decreased Working Memory Performance and Brain Activation Patterns in Elderly**
Thomas Fink¹, Katrin Walther¹, Philipp Sämann², Michael Czisch², Josef Zihl^{1,2}
¹Ludwig-Maximilians-Universität, Munich, Germany, ²Max Planck Institute of Psychiatry, Munich, Germany
- 2442** **The Brain's Pre-Stimulus Default State Interacts with Working Memory in a Load-Dependent Manner**
Mara Kottlow^{1,2}, Anja Bänninger¹, Anthony Schläpfer³, Daniel Brandeis^{4,3}, Lars Michels⁵, Thomas Koenig¹
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- 2443** **Reduced spatial variability in cortical working memory networks after macro-anatomical alignment**
Anna Seitz¹, Viola Oertel-Knöchel¹, Michael Stäblein¹, David Linden², Rainer Goebel³, Robert Bittner^{1,4,5}
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- 2444** **Multivariate analyses on intracranial EEG task characteristics during human working memory**
Amirhossein Jahanbeka^{1,2}, Marcin Leszczynski¹, Lorena Deuker¹, Juergen Fell¹, Christian Elger¹, Nikolai Axmacher^{1,2}
¹Department of Epileptology, University of Bonn, Bonn, Germany, ²German Center for Neurodegenerative Diseases (DZNE), Bonn, Germany
- 2445** **Neural dissociation between visual working memory precision and visual working memory number**
Elena Galeano Weber^{1,2}, Benjamin Peters³, Christoph Bledowski³, Christian Fiebach^{1,2}
¹Goethe University, Department of Psychology, Frankfurt, Germany, ²IDEA Center for Individual Development and Adaptive Education, Frankfurt, Germany, ³Goethe University Frankfurt, Institute of Medical Psychology, Frankfurt, Germany
- 2446** **Bilingual verbal codes differ in their activation of the MNL: EEG evidence during a WM task**
Cristina Gil¹, Manuel Carreiras², Elena Salillas¹
¹Basque Center on Cognition, Brain and Language, San Sebastián, Spain, ²Basque Center on Cognition, Brain and Language (BCBL), Donostia, Spain
- 2447** **Effects of lateralized Theta-Burst TMS on visual attention and working memory performance**
Andreas Becke¹, Tom Arnold², Anne Vellage², Notger Müller²
¹Institute for Cognitive Neurology and Dementia Research, Magdeburg, Germany, ²German Centre for Neurodegenerative Diseases (DZNE), Magdeburg, Germany
- 2448** **EEG correlates of working memory retrieval after distraction**
Heidrun Schultz¹, Tobias Sommer¹, Jan Peters^{1,2}
¹Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ²Helen Wills Neuroscience Institute, University of California, Berkeley, Berkeley, CA
- 2449** **Gamma oscillations underlie the maintenance and integration of feature in visual working memory**
Sheng H. Wang¹, Santeri Rouhinen¹, Roosa Honkanen¹, Matias Palva², Satu Palva¹
¹University of Helsinki, Helsinki, Finland, ²Neuroscience center, University of Helsinki, Helsinki, Finland

- 2450 Domain-specific and domain-general neural architecture of human visual short term memory**
Ying Cai^{1,2}, Siyao Li^{1,2}, Gui Xue^{1,2}
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- 2451 MRI model of working memory development predicts training induced working memory improvement**
Henrik Ullman¹, Elin Lidman¹, Torkel Klingberg¹
¹Neuroscience Department, Karolinska Institutet, Stockholm, Sweden
- 2452 Domain-specific pattern separation in the medial temporal lobe**
David Berron¹, Anne Maass¹, Katja Neumann², Hartmut Schuetze¹, Magdalena Sauvage³, Dharshan Kumaran⁴, Emrah Duzel¹
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- 2453 Influence of varying noradrenaline levels related to the DBH polymorphism on memory and attention**
Anne Vellage^{1,2,3}, Andreas Becke³, Constanze Seidenbecher⁴, Björn Schott⁵, Notger Müller^{1,3}
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- 2454 The neurophysiological correlates of spatial working memory consolidation**
Robert Bittner^{1,2,3}, Peter Hahn^{2,3}, Christina Novak^{2,3}, Astrid Rehner^{2,3}, Viola Oertel-Knöchel¹, Wolf Singer^{2,3}, Danko Nikolic^{2,3}
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- 2455 Dorsolateral prefrontal contributions to working memory interference by emotional distraction**
Diego Redolar-Ripoll¹, Raquel Viejo-Sobera¹, Marc Palaus-Gallego¹, Elena Muñoz-Marrón¹
¹Cognitive Neurolab. IN3-Universitat Oberta de Catalunya (UOC), Barcelona, Spain
- 2456 Brain volume predictors of illusory conjunctions during visual short-term memory**
Shuo Qin¹, Nithya Ramakrishnan¹, Kaoru Nashiro², Margaret O'Connell³, Chandramallika Basak³
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- 2457 TDCS over Right DLPFC Protects Spatial Working Memory from Motor Dual-task Interference**
Philip Tseng¹, Tzu-Yu Hsu¹, Yi-Jen Wu², Ming-Chyi Pai³, Chou-Ching Lin³, Chi-Hung Juan¹
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Schedule of Poster Presentations

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Information listed, including author affiliations, appear as submitted.

Brain Stimulation Methods

DEEP BRAIN STIMULATION

- 3000 Electrical stimulation of a face-selective area impairs individual face discrimination**
Jacques Jonas¹, Bruno Rossion², Louis MAILLARD³
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- 3001 Brain connectivity differences with subthalamic microlesion in Parkinson's disease**
Karsten Mueller¹, Štefan Holiga¹, Filip Ruzicka², Dusan Urgosik³, Harald Möller¹, Evzen Ruzicka², Matthias Schroeter^{1,4}, Robert Jech²
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- 3002 Utility of 7T MRI for Deep Brain Stimulation (DBS) Applications**
Yuval Duchin¹, Guillermo Sapiro², Kenneth Baker¹, Jon McIver³, Jerrold Vitek¹, Noam Harel¹
¹University of Minnesota, Minneapolis, MN, ²Duke University, Durham, NC, ³Regions Hospital, St. Paul, MN
- 3003 eAuto-DBS: A toolbox for automatic DBS-Electrode localizations**
Andreas Horn^{1,2}, Thomas Schönecker¹, Andrea Kühn¹
¹Movement Disorders Unit, Charité — University Medicine, CVK, Berlin, Germany, ²Center for Adaptive Rationality, Max Planck Institute for Human Development, Berlin, Germany
- 3004 Subject-specific atlas of the non-human primate brain for DBS applications**
Laura Zitella¹, Joe Xiao¹, Ben Teplitzky¹, Daniel Kastl¹, Yuval Duchin², Gregor Adriany², Essa Yacoub², Matthew Johnson¹, Noam Harel²
¹University of Minnesota / Department of Biomedical Engineering, Minneapolis, MN, ²University of Minnesota / Department of Radiology / CMRR, Minneapolis, MN
- 3005 EEG responses to a stop signal task in OCD patients treated by subthalamic stimulation**
Astrid Kibler^{1,2}, Guillaume Gras-Combe^{3,2}, Damien Benis^{1,2}, Julien Bastin^{1,2}, Thierry Bougerol^{4,2,1}, Stéphan Chabardès^{5,2,1}, Mircea Polosan^{4,2,1}, Olivier David^{1,2}
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- 3006 Memory enhancement via deep brain stimulation of human nucleus accumbens**
Ana Galarza Vallejo¹, Javier J. Gonzalez-Rosa¹, Rocío Arza², Blanca Reneses Prieto³, Juan Barcia², Bryan Strange¹
¹Laboratory for Clinical Neuroscience, CTB, UPM, Madrid, Spain, ²Department of Neurosurgery, Hospital Clínico San Carlos, Madrid, Spain, ³Department of Psychiatry, Hospital Clínico San Carlos, Madrid, Spain
- 3007 Reward processing and action selection modulation in Parkinson patients with Deep Brain Stimulation**
Caroline Wagenbreth¹, Imke Galazky¹, Hans-Jochen Heinze², Juergen Voges³, Tino Zaehle⁴
¹Departments of Neurology and Stereotactic Neurosurgery, Otto-von-Guericke University, Magdeburg, Germany, ²University of Magdeburg, Magdeburg, Germany, ³Departments of Neurology and Stereotactic Neurosurgery and of Behavior, Otto von Guericke University, Magdeburg, Germany, ⁴Department of Neurology, Otto v. Guericke University, Magdeburg, Germany

3008 A multimodal approach to locate the STN electrodes in Parkinson disease patients
Muthuraman Muthuraman¹, Helge Hellriegel², Christian Hartmann³, Nienke Hoogenboom⁴, Holger Krause⁵, Kidist Mideksa⁶, Martin Südmeyer⁷, Alfons Schnitzler⁸, Günther Deutsch⁹
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3009 Multi-modal fMRI-DWI to predict success of striatal DBS in obsessive compulsive disorder
Jose Angel Pineda-Pardo¹, Josue Avecillas², Rocío Arza³, JJ Lopez-Ibor⁴, Bryan Strange⁵, Juan Barcia³
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DIRECT ELECTRICAL/OPTOGENIC STIMULATION

3010 A causal role of the fusiform face area in face perception
Corey Keller¹, Ido Davidesco², Pierre Megevand³, David Groppe¹, Fred Lado⁴, Ashesh Mehta⁵
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3011 Electrical Stimulation of Left and Right Fusiform Gyrus Causes Different Effects in Face Perception
Vinitha Rangarajan¹, Dora Hermes¹, Brett Foster¹, Kevin Weiner¹, Corentin Jacques¹, Kalanit Grill-Spector¹, Josef Parvizi¹
¹Stanford University, Stanford, CA

3012 Intra- and interhemispheric temporal lobe connectivity: cortico-cortical evoked potential study
Pierre Megevand¹, David Groppe¹, Matthew Goldfinger¹, Stephan Bickel², Fred Lado², Ashesh Mehta¹
¹Hofstra North Shore-LIJ School of Medicine and Feinstein Institute for Medical Research, Manhasset, NY, ²Department of Neurology, Montefiore Medical Center, Bronx, NY

3013 Cortico-cortical evoked potentials may reveal pathological and functional networks in the brain
Laszlo Entz^{1,2,3}, Emilia Tóth¹, Dániel Fabó², Corey Keller⁴, Stephan Bickel⁵, Loránd Erőss², Istvan Ulbert^{1,3}, Ashesh Mehta⁶
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TDCS

3014 Increasing mathematical performance by using transcranial Direct Current Stimulation (tDCS)
Tobias Hauser^{1,2,3}, Roland H. Grabner^{4,5}, Stephanie Rotzer³, Susan Merillat^{3,6}, Lutz Jäncke^{3,6}
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- 3015 Transcranial direct current stimulation (tDCS) in patients with nicotine dependence and its effect**
Susanne Karch¹, Nadezda Reichenbach², Daniel Keeser³, Heike Ludwig⁴, Anna Zeren⁴, Marco Paolini⁵, Boris Rauchmann⁶, Janusch Blautzik⁶, Oliver Pogarell⁷, Frank Padberg⁸, Tobias Rüther⁴
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- 3016 Modulatory Role of Personality Traits on Therapeutic Effects of tDCS in Major Depressive Disorder**
Seyed Ehsan Parhizgar¹, Somayeh Ghafoorifard², Shahin Miri³, Seyed Mohammadreza Seyedahmadian³
¹Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of, ²Shahid Beheshti Medical Sciences University, Tehran, Iran, Islamic Republic of, ³Tehran University of Medical Sciences, Tehran, Iran, Islamic Republic of
- 3017 Cognitive control: tDCS induced enhancements and its neural correlates**
Jiixin Yu¹, Philip Tseng², S.-W. Wu¹, Chi-Hung Juan²
¹Institute of Neuroscience, National Yang-Ming University, Taipei, Taiwan, ²Institute of Cognitive Neuroscience, National Central University, Jhongli, Taiwan
- 3018 Investigating the problem size effect using tDCS and EEG**
Bruno Rüttsche¹, Roland Grabner², Tobias Hauser^{3,4}, Lutz Jäncke⁵
¹Institute for Behavioral Sciences, ETH Zurich, Zurich, Switzerland, ²Georg-Elias-Müller-Institute of Psychology, Georg-August-University of Göttingen, Göttingen, Germany, ³University Clinics of Child and Adolescent Psychiatry (UCCAP), University of Zurich, Zurich, Switzerland, ⁴Wellcome Trust Centre for Neuroimaging, University College London, London, United Kingdom, ⁵Division Neuropsychology, Institute of Psychology, University of Zurich, Zürich, Switzerland
- 3019 Prefrontal AtDCS enhances vocal and manual reactive inhibition**
Leidy Castro Meneses¹, Blake Johnson¹, Paul Sowman¹
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- 3020 Beta frequency EEG activity increased during transcranial direct current stimulation (tDCS)**
Myeong Seop Song^{1,2}, Kyongsik Yun^{3,2}
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- 3021 Selective Modulation of Cortical Alpha Oscillations by Transcranial Alternating Current Stimulation**
Randolph Helfrich¹, Till Schneider¹, Stefan Rach², Sina Trautmann-Lengsfeld¹, Hannah Knepper¹, Christoph Hermann², Andreas Engel³
¹University Medical Center Hamburg, Hamburg, Germany, ²University of Oldenburg, Oldenburg, Germany, ³University Medical Center Hamburg-Eppendorf, Hamburg, Germany
- 3022 Transcranial direct current stimulation modulates networks of working memory in ADHD adolescents**
Anna Sotnikova¹, Cornelia Soff¹, Katja Becker², Michael Siniatchkin³
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- 3023 Modulating plasticity in the atypically developing brain to enhance learning and cognition**
Chung Yen Looi¹, Jenny Lim², Mihaela Duta¹, Alexander Avramenko³, Roi Cohen Kadosh¹
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- 3024 Effect on the motor learning by Transcranial Direct Current Stimulation of the human motor cortex**
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- 3025 Inconsistent outcomes of tDCS may originate from anatomical differences among individuals**
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- 3026 EEG correlates of reading improvement due to transcranial Direct Current Stimulation**
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- 3027 Anatomical determinants of the electric field during transcranial direct current stimulation**
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- 3028 Cerebellar-parietal connections underpin phonological storage**
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- 3029 A Comparative Evaluation of Electrical Field Visualization from EEG/tDCS**
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- 3030 TDCS modulates functional MRI connectivity and improves negative symptoms in schizophrenia**
Daniel Keeser^{1,2}, Ulrich Palm², Janusch Blautzik, Dr.¹, Michael Kupka¹, Ina Unger², Oliver Pogarell², Susanne Karch², Kirsch Valerie³, Alkomiet Hasan², Birgit Ertl-Wagner¹, Frank Padberg²
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- 3031 Analytic computation of scalp current injection using anisotropic multi-sphere models**
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- 3032 Modulation of Default Mode Network in Methamphetamine dependents by transcranial DC stimulation**
Seyed Sadegh Mohseni Salehi Monfared^{1,2}, Alireza Shahbabaie^{1,3,4}, Mitra Ebrahimpour¹, Bijan Vosoughi Vahdat², Mohammad Ali Oghabian¹, Hamed Ekhtiari^{1,3,4}
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- 3033 State-Dependent Modulatory Effects of Beta- and Gamma-Band TACS: A Concurrent TACS/fMRI Study**
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- 3034 State Dependent Effects of tDCS over DLPFC on Methamphetamine Craving**
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- 3035 The effect of anisotropic conductivity modeling onto focality and directionality in HD-tDCS**
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- 3036 A SCIRun-based toolkit for electric and magnetic stimulation applied to primary motor cortex**
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- 3037 Approximating fully optimized dense array tDCS with a single current source**
Seyhmus Guler¹, Moritz Dannhauer², Burak Erem³, Rob MacLeod⁴, Don Tucker⁵, Sergei Turovets⁶, Phan Luu⁷, Waleed Meleis⁸, Deniz Erdogmus³, Dana Brooks⁹
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- 3038 Simulation-based optimization of tDCS for prospective treatment support of patients with depression**
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- TMS**
- 3039 Motor Evoked and Somatosensory Evoked Potentials for the Predictive Index of Functional Recovery**
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- 3040 Parallel imaging performance of a dedicated MR coil array for concurrent TMS/fMRI experiments**
Lucia Navarro de Lara^{1,2}, Christian Windischberger^{1,2}, Andre Kuhne^{1,2}, Bernhard Strasser^{3,2}, Jürgen Sieg^{1,2}, Ewald Moser^{1,2}, Elmar Laistler^{1,2}
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- 3041 Cerebellar Transcranial Magnetic Stimulation (TMS) impairs visual working memory**
S.H. Annabel Chen¹, Tommy Hock Beng Ng¹, Kai-Ling Kao^{1,2}, Alvin Kheng Seng Lim¹, Chiao-Yi Wu^{1,3}, Goi Khia Eng¹, Gladys Jia Min Heng¹, Wei Peng Teo^{4,5}, Yee Cheun Chan^{6,7}, Effie Chew^{6,7}
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- 3042 Long-period rTMS therapy focused on the M1 or S1-M1-PrM region with navigation for stroke patients**
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- 3043 Interhemispheric communication during the preparation of bimanual movements: A TMS study**
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- 3044 Precuneus GABA modulation by transcranial magnetic stimulation relates to DMN intrinsic connectivity**
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- 3045 Boosting alpha oscillations with transcranial static magnetic stimulation (tSMS) over visual cortex**
Javier J. Gonzalez-Rosa¹, Vanesa Soto-Leon², Pablo Real¹, Guglielmo Foffani², Bryan Strange¹, Antonio Oliviero²
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- 3046 Individual Responses to Theta-Burst rTMS in Cortical Excitability and Motor Network Connectivity**
Charlotte Nettekoven¹, Lukas Jan Volz², Martha Kutscha¹, Eva-Maria Pool¹, Simon Eickhoff³, Gereon Fink⁴, Christian Grefkes¹
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- 3047 TMS-EEG in autism and typically developing children — maturation of interhemispheric connectivity**
Tomasz Jarczok¹, Merve Fritsch², Anne Kröger², Anna Lisa Schneider², Michael Siniatchkin³, Christine Freitag², Stephan Bender²
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- 3048 Frequency-specific interhemispheric connectivity and perceptual bias in apparent motion perception**
Yuji Mizuno^{1,2}, Masahiro Kawasaki^{2,3,4}, Masanori Shimono⁵, Carlo Miniussi^{6,7}, Kenichi Ueno⁸, Chisato Suzuki⁸, Takeshi Asamizuya⁸, Kang Cheng^{8,9}, Keiichi Kitajo^{1,2,4}
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- 3049 TMS Modulates GABA Concentration in the Ventromedial Prefrontal Cortex in Major Depression**
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- 3050 Distinct parieto-frontal networks for auditory word comprehension. A combined cTBS-fMRI study**
Gesa Hartwigsen^{1,2,3}, Maren Klein¹, Wawrzyniak Max¹, Joseph Classen¹, Dorothee Saur^{1,2}
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- 3051 Dual mode Noninvasive Brain Stimulation over Prefrontal Cortices on Verbal Working Memory in Stroke**
Ahee Lee¹, Won Hyuk Chang¹, MIN-SU KIM¹, Yun-Hee Kim¹
¹Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea, Republic of
- 3052 Asymmetric influence of TMS on resting state functional activity in the auditory network**
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- 3053 The Influence of 10 Hz Repetitive TMS Treatment on Resting EEG Activity in MDD and BP Patients**
Agata Wozniak-Kwasniewska^{1,2}, Sylvain Harquel³, David Szekely⁴, Thierry Bougerol⁴, Olivier David²
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- 3054 Predicting and validating TMS induced cortical currents using FEM and two non-invasive MR techniques**
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- 3055 Cortical excitability and neuronal anisotropy are related: TMS-DTI study**
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- 3056 Representing tools as hand movements: an adaptation-stimulation study**
Eleonora Bartoli¹, Laura Maffongelli², Alessandro D'Ausilio¹
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- 3057 Dorsal premotor to primary motor cortex connectivity in patients with Parkinson's disease**
Sergiu Groppa¹, Alexandru Hanganu¹, Timm Bustorf¹, Günther Deuschl¹, Hartwig Siebner²
¹Christian Albrechts University, Department of Neurology, Kiel, Germany, ²Danish Research Centre for Magnetic Resonance, Hvidovre University Hospital, Hvidovre, Denmark
- 3058 Continuous theta burst stimulation modulates resting state connectivity within the semantic network**
Max Wawrzyniak¹, Felix Hoffstaedter², Anika Stockert¹, Katrin Wrede¹, Julian Klingbeil¹, Gesa Hartwigsen³, Simon Eickhoff⁴, Dorothee Saur¹
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- 3059 Does Verbal Working Memory Depend on Phonological Store or Focus of Attention to Memory? A TMS Study**
Görkem Alban-Top¹, Sema Demirci¹, Bora Cebeci², Tamer Demiralp³, A.Emre Öge⁴
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- 3060 Motor evoked potentials as biomarker for sexual craving and orientation**
Martin Schecklmann¹, Berthold Langguth¹, Timm Poepl¹
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- 3061 Paired associative corticocortical stimulation changes overall dynamics in grasping-related network**
Vanessa Johnen¹, Franz-Xaver Neubert¹, Rogier Mars¹, Ethan Buch², Matthew Rushworth¹
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3062 Electric field calculations explain physiological responses to TMS during motor cortex stimulation*Andreas Bungert¹, Andre Antunes¹, Axel Thielscher^{2,1,3}*¹Max Planck Institute for Biological Cybernetics, Tübingen, Germany, ²Hvidovre Hospital, Center for Functional and Diagnostic Imaging and Research, Danish Research Centre, Hvidovre, Denmark, ³Department of Electrical Engineering, Technical University of Denmark, Lyngby, Denmark**3063 Using resting-state fMRI to predict treatment outcome for dmPFC-rTMS in major depression***Nathan Bakker¹, Joseph Geraci², Katharine Dunlop¹, Peter Giacobbe^{2,3}, Tim Salomons⁴, Daniel Blumberger^{6,3}, Z. Jeff Daskalakis^{5,3,1}, Sidney Kennedy^{6,3,1}, Alastair Flint^{2,3,1}, Jonathan Downar^{2,3,1}*¹Institute of Medical Science, University of Toronto, Toronto, Canada, ²Department of Psychiatry, University Health Network, Toronto, Canada, ³Department of Psychiatry, University of Toronto, Toronto, Canada, ⁴University of Reading, Reading, Berkshire, ⁵Centre for Addiction and Mental Health, Toronto, Canada, ⁶Department of Psychiatry, University Health Network, Toronto, Ontario**3064 The Effect and Duration of Neuronavigated Low-Frequency rTMS on Primary Motor Cortex using fMRI***Yu-Sun Min¹, Yongmin Chang², Tae-Du Jung¹*¹Kyungpook National University Hospital, Daegu, Korea, Republic of, ²Kyungpook National University School of Medicine, Daegu, Korea, Republic of**3065 Transcallosal mediated motor inhibition in attention deficit hyperactivity disorder (ADHD)***Deana Crocetti¹, Benjamin Dirlikov², Daniel Peterson³, Cameron Laue⁴, Donald Gilbert⁴, Stewart Mostofsky⁵*¹The Kennedy Krieger Institute, Baltimore, MD, ²The Kennedy Krieger Institute, Baltimore, United States, ³Kennedy Krieger Institute, Baltimore, United States, ⁴Cincinnati Children's Hospital Medical Center, Cincinnati, OH, ⁵Kennedy Krieger Institute, Johns Hopkins, Baltimore, United States**3066 ITBS stimulation to right ventral S1 enhances pitch accuracy in untrained singers***Finkel Sebastian¹, Ralf Veit¹, Anders Friberg², Martin Lotze³, Surjo Soekadar⁴, Niels Birbaumer⁵, Boris Kleber¹*¹University of Tuebingen, Institute for Medical Psychology and Behavioral Neurobiology, Tuebingen, Germany, ²KTH Stockholm, Stockholm, Sweden, ³Functional Imaging Unit, Center for Diagnostic Radiology, University of Greifswald, Greifswald, Germany, ⁴University Hospital Tuebingen, University of Tuebingen, Tuebingen, Germany, ⁵Institute for Medical Psychology and Behavioral Neurobiology, Tübingen, Germany

Disorders of the Nervous System

AUTISM

3067 Atypically organized brain network hubs underlie social communication deficits in childhood autism*Kaustubh Supekar¹, Vinod Menon¹*¹Stanford University School of Medicine, Stanford, United States**3068 Functional connectivity in default mode network predicts autism spectrum traits ?***Minyoung Jung¹, Hirota Kosaka^{1,2,3,4},**Daisuke Saito^{2,4}, Makoto Ishitobi³, Tomoyo Morita⁵, Keisuke Inohara³, Akihiro Sasaki⁶, Mizuki Asano^{2,3}, Sumiyoshi Arai¹, Yasuhiro Masuya³, Toshio Munesue⁷, Akemi Tomoda^{1,2}, Yuji Wada^{2,3}, Norihiro Sadato^{4,8,9}, Hidehiko Okazawa^{2,4}, Tetsuya Iidaka¹⁰*¹Department of Child Development United Graduate School of Child Development, University of Fukui, Eiheiji, Japan, ²Research Center for Child Mental Development, University of Fukui, Eiheiji, Japan, ³Department of Neuropsychiatry, Faculty of Medical Sciences, University of Fukui, Eiheiji, Japan, ⁴Biomedical Imaging Research Center, University of Fukui, Eiheiji, Japan, ⁵Graduate School of Engineering, Osaka University, Suita, Japan, ⁶Pathophysiological and Health Science Team RIKEN Center for Life Science Technologies, Kobe, Japan, ⁷Department of Child Development United Graduate School of Child Development, Kanazawa University, Kanazawa, Japan, ⁸Japan Science and Technology Agency and Technology for Society, Kawaguchi, Japan, ⁹Department of Cerebral Research, National Institute for Physiological Sciences, Okazaki, Japan, ¹⁰Department of Psychiatry, Graduate School of Medicine, Nagoya University, Nagoya, Japan**3069 Relation between anatomical network connectivity and face specialization in Autism Spectrum Disorder***Tanja Kellermann¹, Travis Nesland¹,**Leonardo Bonilha¹, Jonathan Clark², Paul Glaser², Ali Tabesh¹, Xun Zhu¹, Faraday Davies¹, Ramesh Bhatt³, Jane Joseph¹*¹Medical University of South Carolina, Charleston, SC, United States, ²University of Kentucky Chandler Medical Center, Lexington, KY, United States, ³University of Kentucky, Lexington, KY, United States

- 3070 Dysmaturation of Functional Connections Between Cortical Language Areas in Autism**
Stuart Washington¹, Evan Gordon², Jasmit Brar¹, Samantha Warburton¹, Alice Sawyer³, William Gaillard⁴, Layne Kalbfleisch⁵, John VanMeter⁶
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- 3071 Relationship between functional connectivity and brain atrophy in Autism Spectrum Disorder**
Alessandra Pereira¹, Brunno Campos¹, Ana Carolina Coan¹, Luiz Fernando Pegoraro², Paulo Dalgalarondo², Jean-Claude Dreher³, Fernando Cendes¹
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- 3072 Aberrant Social Aversion Network in Autism**
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- 3073 Social Brain Network and Autism Spectrum Disorder: Reduced Connectivity to the Frontal Cortex**
Elgin Hoffmann¹, Carolin Brück¹, Benjamin Kreifelts¹, Thomas Ethofer¹, Dirk Wildgruber¹
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- 3074 Idiosyncratic inter-hemispheric spontaneous connectivity patterns in adults with Autism**
Avital Hahamy¹, Marlene Behrmann², Rafi Malach³
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- 3075 Repetition suppression is diminished as a function of increasing autistic traits**
Michael Ewbank¹, Gillian Rhodes², Elisabeth von dem Hagen¹, Thomas Powell¹, Naomi Bright¹, Raliza Stoyanova¹, Simon Baron-Cohen³, Andrew Calder¹
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- 3076 Greater longitudinal cortical thinning in autism than typical controls during adolescence**
Greg Wallace¹, Ian Eisenberg², Briana Robustelli², Lauren Kenworthy³, Jay Giedd², Alex Martin²
¹George Washington University, Washington, DC, United States, ²NIMH, Bethesda, United States, ³Children's National Medical Center, Washington, DC
- 3077 Effects of Perspective on Brain Activation for Self- and Other-Referential Processing in Autism**
Ryuichiro Hashimoto^{1,2}, Takashi Yamada¹, Takashi Itahashi¹, Motoaki Nakamura³, Hiromi Watanabe¹, Chieko Kanai⁴, Akira Iwanami¹, Nobumasa Kato¹
¹Showa University School of Medicine, Tokyo, Japan, ²Tokyo Metropolitan University, Tokyo, Japan, ³Kinko Hospital, Kanagawa, Japan, ⁴Sagami Women's University, Sagamihara, Japan
- 3078 Neural processing of voices in autism spectrum disorder**
Stefanie Schelinski¹, Kamila Borowiak¹, Katharina von Kriegstein^{1,2}
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- 3079 A Multi-Site Study: Classify Autism Spectrum Disorder Using Frequency Specific Function Connectivity**
Heng Chen¹, Youxue Zhang¹, Fengmei Lu¹, Xunjun Duan¹, Huafu Chen¹
¹University of Electronic Science and Technology of China, Chengdu, China
- 3080 Cortical thickness and gyrification in 6-to-9 year old children with autistic traits — A population**
Laura Blanken¹, Sabine Mous¹, Akhgar Ghassabian¹, Ryan Muetzel¹, Hanan El Marroun¹, Frank Verhulst¹, Henning Tiemeier¹, Tonya White¹
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- 3081 Atypical cerebral lateralization in high-functioning male adults with autism**
Dorothea Floris¹, Meng-Chuan Lai¹, John Suckling², Michael Lombardo¹, Christine Ecker³, Bhismadev Chakrabarti⁴, Sally Wheelwright⁵, Bonnie Auyeung⁴, Carrie Allison⁶, Amber Ruigrok⁴, Edward Bullmore², Consortium MRC AIMS⁷, Declan Murphy⁷, Simon Baron-Cohen⁴
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- 3082 The influence of social valence on imitation and observation of facial expressions in Autism**
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- 3083 Resting State Connectivity Differences in rTPJ but not rSMG in ASD Compared to Healthy Controls**
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- 3084 Salience network connectivity and social attention in children with autism**
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- 3085 High-frequency gamma responses in children with autism spectrum disorders during a visual task**
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- 3086 Functional Network Organization of the Action Observation Network in Autism: A Graph Theory Approach**
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- 3087 Neural Correlates of Reward Processing in High Functioning Adults with Autism Spectrum Disorder**
Joseph King¹, Daniel Geisler¹, Juliane Froebel¹, Elizabeth Schaab¹, Friederike Tam², Katja Albertowski², Veit Roessner³, Michael Smolka⁴, Stefan Ehrlich¹
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- 3088 Behavioural and neural correlates of interplay between flexibility and emotion processing in Autism**
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- 3089 Visuomotor Learning in Autism**
Elizabeth Sharer¹, Deana Crocetti¹, John Muschelli², Mary Beth Nebel^{3,1}, Anita Barber^{3,1}, Stewart Mostofsky^{1,3}, Brian Caffo², James Pekar^{1,3}
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- 3090 Brain Quantitative Relaxometry in Male Adults with Autism**
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- 3091 Cingulum disconnectivity in relatives of subjects with ASD: A whole-brain tractography pilot study**
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- 3092 Impaired manual dexterity in Autism correlates with abnormalities in short fronto-parietal networks**
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- 3093 Voxel-based morphometry and BrainAGE detect no differences in adults with high-functioning autism**
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- 3094 Network inefficiencies and brain overgrowth in autism spectrum disorder**
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- 3095 Superior pitch processing in children with autism is related to auditory cortical structure**
Nicholas Foster^{1,2}, Ana Tryfon^{1,2}, Tia Ouimet^{1,2}, Krissy Doyle-Thomas³, Evdokia Anagnostou³, Alan Evans⁴, Lonnie Zwaigenbaum⁵, Krista Hyde^{1,2}, NeuroDevNet ASD imaging group⁶
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- 3096 Decreased Intrinsic Connectivity between Motion Processing Areas in ASD**
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- 3097 A comparison of intracranial and brain volume between autistic patients, parents, sibling, controls**
BEGGIATO ANITA^{1,2,3}, Frédérique Amsellem², Monique El Maleh², Valérie Chaput⁴, Marion Poumeyreau², Sebag Guy², Thomas Bourgeron⁵, Richard Delorme², Roberto Toro⁶
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- 3098 Reduced efficiency of the default-mode network structure in children and adolescents with autism**
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- 3099 Visual-motor Functional Connectivity relates to Autism Severity**
Mary Beth Nebel^{1,2}, Ani Eloyan³, Carrie Nettles¹, Kristie Sweeney¹, Katarina Ament¹, Rebecca Ward¹, Ann Choe^{1,2}, Anita Barber^{1,2}, James Pekar^{1,2}, Stewart Mostofsky^{1,2}
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- 3100 Common Variants of the Oxytocin Receptor Gene Impact Functional and Structural Brain Connectivity**
Leanna Hernandez¹, Jeffrey Rudie¹, Devora Beck-Pancer¹, Susan Bookheimer¹, Mirella Dapretto¹
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- 3101 Amygdala and Hippocampal Morphology in High Functioning Children with Autism Spectrum Disorders**
Roma Vasa¹, Xiaoying Tang², Deana Crocetti³, Michael Miller², Stewart Mostofsky¹
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- 3102 Impaired social abilities on semantic processing in youths with autism spectrum disorder**
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- 3103 Differential Neural Correlates of Semantic Processing between Youths with Autism and Their Sibling**
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- 3104 Increased Basal Ganglia Volumes in Children with Autism Spectrum Disorder: Effect of comorbid ADHD**
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EPILEPSY

- 3105 A Preliminary Study on Multivariate Prediction of Seizure Outcome after Epilepsy Surgery**
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- 3106 Individual classification of children with epilepsy using support vector machine**
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- 3107 Probabilistic Tractography of Meyer's Loop Asymmetries**
Uta Sboto-Frankenstien^{1,2}, Patricia Dreesen de Gervai³, R. Bolster^{4,5}, Petr Mikulenk^{6,7}, Boguslaw Tomanek^{8,9}
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- 3108 Abnormal resting state functional network in epilepsy patients with focal cortical dysplasia**
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- 3109 Comparison of EEG, MEG and Combined EEG/MEG Localizations of Epileptic Activity Based on Subaverages**
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- 3110 Connectivity and grey matter abnormalities in bitemporal lobe epilepsy with hippocampal sclerosis**
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- 3111 EEG-fMRI in epilepsy patients: Comparison of Classical Analysis and 2d-Temporal Clustering Analysis**
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- 3112 EEG-fMRI event-related ICA of spike-wave in genetic generalised epilepsy vs Lennox-Gastaut syndrome**
David Abbott^{1,2}, Aaron Warren^{1,2}, Patrick Carney^{1,2}, Graeme Jackson^{1,2}, John Archer²
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- 3113 Altered Intrinsic Functional Connectivity of Salience Network in Childhood Absence Epilepsy**
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- 3114 An Empire Vanquished by a Tiny Bump, How Hypothalamic Hamartoma Causes Global Encephalopathy**
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- 3115 Marker-based ballistocardiographic artifact correction improves EEG-fMRI of focal epilepsy patients**
Katharina Körbl¹, Julia Jacobs², Michael Herbst³, Georgia Ramantani², Andreas Schulze-Bonhage², Jürgen Hennig², Pierre LeVan³
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- 3116 Topological organization of structural networks in focal cortical dysplasia**
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- 3117** **Voxel-based graph metrics demonstrate altered functional connectivity in Temporal Lobe Epilepsy**
David Vaughan¹, Chris Tailby¹, Graeme Jackson¹
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- 3118** **Describing Epilepsy-related BOLD Changes in the Framework of Resting State Functional Networks**
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¹MR Research Center, Semmelweis University, Budapest, Hungary, ²UCL Institute of Neurology, London, United Kingdom
- 3119** **Co-deActivation Patterns Reduced in Children with Temporal Lobe Epilepsy**
Tomi Tasala¹, Juha Nikkinen¹, Osmo Tervonen¹, Vesa Kiviniemi¹
¹Department of Diagnostic Radiology, MRC, Oulu University Hospital, Oulu, Finland
- 3120** **Resting-State Networks and Dissociation in Psychogenic Non-Epileptic Seizures**
Sylvie van der Kruis¹, Sridhar Jagannathan², Nynke Bodde¹, René Besseling³, Richard Lazeron¹, Kristl Vonck⁴, Paul Boon⁴, Pierre Cluitmans², Paul Hofman³, Walter Backes³, Bert Aldenkamp¹, Jacobus Jansen⁵
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- 3121** **Structural connectivity differences in left and right temporal lobe epilepsy**
Pierre Besson¹, Vera Dinkelacker², Romain Valabrègue³, Lionel Thivard⁴, Xavier Leclerc¹, Michel Baulac⁴, Daniela Sammler⁵, Olivier COLLIOT⁶, Stéphane Lehericy⁷, Séverine Samson⁸, Sophie Dupont⁴
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- 3122** **Co-localization of interictal discharges and BOLD signal examined with simultaneous iEEG-fMRI**
Craig Beers¹, Yahya Agha-Khani¹, Ismael Gaxiola², Daniel Pittman², Anita Kang¹, Paolo Federico²
¹University of Calgary, Calgary, Canada, ²University of Calgary, Calgary, Alberta
- 3123** **Automatic Multivariate Classification of Mesial Temporal Lobe Epilepsy using Structural MRI**
Longfei Su¹, Jie An², Qiongmin Ma³, Dewen Hu⁴
¹National University of Defense Technology, Changsha, China, ²Medical Imaging Centre, Nanfang Hospital, Guangzhou, Guangdong, ³College of Mechatronics and Automation, National University of Defense Technology, Changsha, Hunan, China, ⁴College of Mechatronics and Automation, National University of Defense Technology, Changsha, China
- 3124** **Disrupted DMN connectivity in medial temporal lobe epilepsy indicates episodic memory capacity**
Cornelia McCormick¹, Melanie Cohn¹, Andrea Protzner², Alexander Barnett¹, Taufik Valiante³, Mary Pat McAndrews⁴
¹University of Toronto, Toronto, Canada, ²University of Calgary, Calgary, Canada, ³Krembil Neuroscience Center, Toronto, Canada, ⁴Krembil Neuroscience Centre & Toronto Western Research Institute, Toronto, Ontario
- 3125** **Resting-state functional connectivity predicts cognitive change after surgery in temporal epilepsy**
Gaelle Doucet¹, Dorian Pustina¹, Robert Rider², Nathan Taylor², Christopher Skidmore², Ashwini Sharan³, Michael Sperling³, Joseph Tracy³
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- 3126** **Disrupted Functional Connectivity of Thalamus Modulated by ALFF in Idiopathic Generalized Epilepsy**
Meiling Li¹, Heng Chen¹, Feng Liu¹, Fengmei Lu¹, Jiang Zhang¹, HuaFu Chen¹
¹University of Electronic Science and Technology of China, Chengdu, China
- 3127** **White matter abnormalities in Benign Adult Familial Myoclonic Epilepsy in a Chinese Han pedigree**
Lili Long¹, Lin Xu¹, Peng Fang², YanMin Song¹, Hongyu Long¹, Luo Zhou¹, Bo Xiao¹, Dewen Hu²
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- 3128 Can resting-state functional connectivity predict language laterality index in temporal epilepsy?**
Gaelle Doucet¹, Dorian Pustina¹, Christopher Skidmore², Ashwini Sharan³, Michael Sperling³, Joseph Tracy³
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- 3129 Contralateral spread of temporal lobe interictal spikes is related to damage of the tapetum fibers**
Dorian Pustina¹, Christopher Skidmore², Gaelle Doucet¹, Michael Sperling³, Joseph Tracy³
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- 3130 Absence seizures reduce BOLD oscillation frequency in the default mode network**
Xiaopeng Song¹, Zhiqiang Zhang², Wei Liao², Qiang Xu², Yi Zhang³, Guangming Lu², Yijun Liu¹
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- 3131 Functional connectivity in new-onset childhood epilepsy**
Ishmael Amarreh¹, Remi Patriat², Bruce Hermann³, Mary Meyerand⁴, Rasmus Birn³
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- 3132 Insular Subregions of Resting State Functional Connectivity in Psychogenic Non-Epileptic Seizures**
Rong Li¹, Zhiqiang Li¹, Qing Gao¹, Huaifu Chen¹
¹University of Electronic Science and Technology of China, Chengdu, China
- 3133 Local and Global Network Disruptions in Lennox-Gastaut Syndrome**
Mangor Pedersen¹, Evan Curwood², John Archer³, David Abbott^{1,2,3}, Graeme Jackson^{1,2,3}
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- 3134 Intrinsic Perilesional Functional Connectivity in Focal Epilepsy**
Mangor Pedersen¹, Graeme Jackson^{1,2,3}
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- 3135 The tensor features of different fiber bundles in chronic focal cortical epilepsy**
Syu-Jyun Peng¹, Yue Loong Hsin², Tomor Harnod³, Jang-Zern Tsai¹
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- 3136 Effect of electrode montage on functional connectivity during an epileptic seizure**
Pieter van Mierlo¹, Octavian Lie², Charles Szabo², Jose Cavazos², Stefaan Vandenberghe¹
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- 3137 The effect of medication on fMRI resting state connectivity in focal epilepsy**
Kees Hermans^{1,2}, Pauly Ossenblok¹, Albert Colon¹, Liesbeth Geerts³, Ruud Verdaasdonk², Paul Boon¹, Jan De Munck²
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- 3138 Language fMRI in healthy adults: Feasibility of self-paced stimulus presentation**
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- 3139 Comparison of language fMRI during two paradigms of language in temporal lobe epilepsy**
Laura Seynaeve¹, Katarzyna Adamczuk², Silvia Kovacs³, Rik Vandenberghe⁴, Stefan Sunaert³, Patrick Dupont⁵, Wim Van Paesschen⁶
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- 3140 Simultaneous intracranial EEG and fMRI (icEEG-fMRI) of an epileptic seizure**
David Carmichael¹, Umair Chaudhary², Rachel Thornton², Beate Diehl², Andrew McEvoy³, Roman Rodionov⁴, Serge Vulliemoz⁵, Matthew Walker², John Duncan², Louis Lemieux²
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- 3141 Structural MRI profiling: accurate focus and surgical outcome prediction in temporal lobe epilepsy**
Boris Bernhardt¹, Hosung Kim¹, Andrea Bernasconi¹, Neda Bernasconi¹
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- 3142 EEG Time-Varying Effective Connectivity in Left and Right Temporal Lobe Epilepsy**
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- 3143 An investigation of the role of interictal activity on a natural stimulus in children with epilepsy**
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- 3144 Resting state fMRI and intracerebral recording studies of basal ganglia in epilepsy**
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- 3145 Subregional mesiotemporal network regularization and fragmentation in temporal lobe epilepsy**
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- 3146 Cortical activity related to working memory in Temporal Lobe Epilepsy patients**
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- 3147 Functional and effective connectivity during focal epileptic seizures**
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- 3148 Simultaneous EEG-fMRI: posterior slow-waves compared with occipital alpha in absence epilepsy**
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- 3149 Long-duration properties of functional brain networks in patients with epilepsy**
Manolis Christodoulakis¹, Eleftherios Papathanasiou², Avgis Hadjipapas^{3,4}, Maria Anastasiadou¹, Savvas Papacostas², Georgios Mitsis^{1,5}
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- 3150 Interictal metabolic alterations in patients with psychogenic non-epileptic seizures**
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- 3151 To repeat or not to repeat: Indistinct data in fTCD language lateralization in epilepsy patients**
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- 3152 Grammar Tests Help Evaluate Hemispheric Dominance for Language Function in the Wada Procedure**
Monika Polczynska^{1,2}, Susan Curtiss¹, Patricia Walshaw¹, Christopher Benjamin¹, Michael Jones¹, Prabha Siddarth¹, Celia Vigil¹, Brian Moseley¹, Dawn Eliashiv^{3,1}, Susan Bookheimer¹
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- 3153 White matter endophenotypes in temporal lobe epilepsy patients and their asymptomatic siblings**
Christopher Whelan¹, Maria Cheung², Parameswaran Iyer³, Saud Alhusaini⁴, Erik O'Hanlon¹, Jim Meaney⁵, Andrew Fagan⁵, Norman Delanty⁶, Colin Doherty⁷, Gianpiero Cavalleri²
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- 3154 Amygdala Volume and Predictors of Psychiatric Symptoms After Anterior Temporal Lobectomy**
Daniel Moadel¹, Gaelle Doucet¹, Dorian Pustina¹, Robert Rider², Nathan Taylor², Michael Sperling³, Ashwini Sharan³, Joseph Tracy³
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- 3155 Longer left temporal lobe epilepsy is associated with progressive loss of the right arcuate**
Dorian Pustina¹, Gaelle Doucet¹, Christopher Skidmore², Michael Sperling³, Joseph Tracy³
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- 3156 Large-scale Patient-specific Model of Partial Seizures Propagation**
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- 3157 Structural and functional mapping of the seizure propagation pathway in a hypothalamic hamartoma**
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- 3158 T2 relaxometry shows focal increases in extra-temporal lobe epilepsy**
Evan Curwood¹, David Abbott², Anne Berg³, Graeme Jackson²
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- 3159 Postoperative outcome in temporal lobe epilepsy: Relation to presurgical subcortical shape analysis**
Simon Keller¹, Mark Richardson², Jan-Christoph Schoene-Bake³, Jonathan O'Muircheartaigh², Christian Elger⁴, Bernd Weber³

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- 3160 Diffusion Tensor Imaging and Tractography identify structural changes in cryptogenic focal epilepsy**

Christian Vollmar¹, Joanna Goc¹, Nadia Khalilieh¹, Jan Rémi¹, Elisabeth Hartl¹, Claudia Catarino¹, Soheyl Noachtar¹

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- 3161 Impaired Internetwork Functional Interactions in Idiopathic Generalized Epilepsy**

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- 3162 Evidence for a Disruption of the Brainstem Networks in TLE: A Mechanism for SUDEP?**

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OBSESSIVE-COMPULSIVE DISORDER AND TOURETTE SYNDROME

- 3163 Control your Mind — Obsessive-Compulsive Disorder and the Neural Activity of Thought Suppression**

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- 3164 Altered fronto-striatal connectivity in patients with OCD**

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- 3165 Graph Theory Analysis of Task fMRI Data Reveals Aberrant Visual Networks in Body Dysmorphic Disorder**

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- 3166 Resting-state connectivity of the amygdala predicts therapy outcome in obsessive compulsive disorder**

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- 3167 Meta-analyses of structural & functional neuroimaging studies in obsessive-compulsive disorder**

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- 3168 Investigating the resting state networks in Tourette syndrome**

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- 3169 Functional connectivity in obsessive compulsion disorder in relation to disgusting visual stimuli**

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- 3170 Working memory process in patients with obsessive-compulsive disorder**
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- 3171 Neurocognitive endophenotype of Obsessive-Compulsive Disorder**
Matilde Maria Serena Vaghi¹, Adam Hampshire², Naomi Fineberg¹, Samuel Chamberlain¹, Trevor Robbins¹
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- 3172 Disruption of white matter in obsessive-compulsive disorder: A meta-analysis of whole-brain studies**
Xinyu Hu¹, Yi Liao¹, Lizhou Chen¹, Shiguang Li¹, Bochao Chen¹, Mingying Du¹, Qi Liu¹, Qiyong Gong¹, Xiaoqi Huang¹
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- 3173 Amygdala hyperactivation in obsessive-compulsive disorder and its modulation by distraction**
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- 3174 Default Mode Network Connectivity Differences In Obsessive-Compulsive Disorder**
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- 3175 Subregional amygdalar connectivity during symptom provocation in obsessive-compulsive disorder**
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OTHER DISORDERS

- 3176 Connectivity increase with leptin-substitution treatment in patients with congenital lipodystrophy**
Karsten Mueller¹, Haiko Schlögl^{1,2}, Annette Horstmann^{1,3}, Harald Möller¹, Konstanze Miehle², Burkhard Pleger^{1,4}, Arno Villringer^{1,3,4}, Mathias Fasshauer^{2,3}, Michael Stumvoll^{2,3}
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- 3177 Cognitive Distraction in Borderline Personality Disorder After Dialectical Behavioral Therapy**
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- 3178 Increased cortical curvature in multiple sclerosis reflects white matter integrity loss and atrophy**
Jasmin Marinell¹, Julia Krämer¹, Thomas Dünig¹, Tobias Ruck¹, Ole Simon¹, Frauke Zipp², Heinz Wiendl¹, Sven Meuth¹, Michael Deppe³
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- 3179 Functional brain connectivity is associated with persistent cancer related fatigue**
Johnson Hampson¹, Tohfa Khabir², Suzanna Zick², Richard Harris²
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- 3181 Functional connectivity correlates of cognitive impairment in primary progressive multiple sclerosis**
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- 3182 Altered hypothalamic functional connectivity beyond the pain matrix in patient with cluster headache**
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- 3183 Altered white matter connectivity in cluster headache: A longitudinal diffusion tensor imaging study**
Kun-Hsien Chou¹, Fu-Chi Yang², Chu-Chung Huang³, Pei-Lin Lee⁴, Yung-Yang Lin⁵, Shuu-Jiun Wang⁶, Ching-Po Lin²
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- 3184 Cortical Volume and Thickness Associated with Cognitive Impairment in Chronic Kidney Disease**
Chun-Yuan Chang^{1,2}, Jong-Ling Fuh³, Fa-Hsuan Lin¹
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- 3185 Longitudinal diffusion tensor imaging study in patients with minimal hepatic encephalopathy**
Wen-Jin Hsieh¹, Kun-Hsien Chou², Wei-Che Lin³, Yu-Fan Cheng³, Chao-Long Chen⁴, Ching-Po Lin⁵
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- 3186 Resting-State Network Plasticity in the Presence of Brain Tumors**
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- 3187 Exploring subcortical morphology associated with Axis II Cluster B and C personality disorders**
Doris Payer¹, Min-Tae Park¹, Stephen Kish^{1,2}, Isabelle Boileau^{1,2}, Mallar Chakravarty^{1,2}
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- 3188 Abnormal default mode network functional connectivity in patients recovered from anorexia nervosa**
Stefan Ehrlich¹, Sabine Clas², Juliane Hantke³, Joseph King², Ilka Schober², Maria Seidel², Daniel Geisler⁴, Franziska Ritschel⁴, Jessica Weiss⁴, Veit Roessner⁴
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- 3189 Anger induction and imagination of aggression in borderline personality disorder**
Krisztina Nagy¹, Katja Bertsch², Falk Mancke¹, Andrea Gäbel¹, Sabine Herpertz¹
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- 3190 The neural correlates of motor recovery after a demanding task in patients with multiple sclerosis**
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- 3191 Dissociative part-dependent resting-state activity: An fMRI study of dissociative identity disorder**
Yolanda Schlumpf¹, A.A.T. Simone Reinders^{2,3}, Ellert R.S. Nijenhuis⁴, Roger Luechinger⁵, Matthias J.P. van Osch⁶, Lutz Jäncke^{1,7}
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- 3192 Chronic Inflammation Due to Primary Biliary Cirrhosis Modulates Resting-State Connectivity**
Victoria Mosher¹, Mark Swain¹, Rob Myers¹, Glenda MacQueen¹, Bradley Goodyear¹
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- 3193 Regional cerebellar volume differences in children with fetal alcohol spectrum disorders (FASD)**
Marcin Jankiewicz^{1,2}, Natalie Boonzaier³, Christopher Warton⁴, Priya Lakshmi Narayanan¹, Christopher Molteno⁵, Sandra Jacobson⁶, Ernesta M. Meintjes¹, Joseph Jacobson⁶
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- 3194 Macrophage Inhibitory Cytokine — 1 Is Linked to Brain Volume in Older Individuals**
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- 3195 Neural Correlates of Proactive and Reactive Aggression in Adolescent Girls**
Yaling Yang¹, Alina Arakelian¹, Pan Wang², Shantanu Joshi³, Adrian Raine⁴, Laura Baker⁵, Anand Joshi⁶
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- 3196 White matter integrity disruptions associated with cognitive dysfunction in type 2 diabetes patients**
Yunxia Wang¹, Junying Zhang¹, Xiaoqing Zhou¹, Zhanjun Zhang¹
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- 3197 Iron Content of the Deep White Matter in Huntington's Disease**
Margherita Di Paola¹, Owen Phillips¹, Cristina Sanchez-Castaneda¹, Carlo Caltagirone², Ferdinando Squitieri³, Umberto Sabatini⁴
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- 3198 Gray matter Atrophy and Alexithymia in a general population sample**
Katharina Wittfeld¹, Katrin Hegenscheid², Norbert Hosten², Martin Lotze³, Deborah Janowitz⁴, Henry Völzke⁵, Ulrich John⁶, Sven Barnow⁷, Harald Freyberger⁸, Hans Jörgen Grabe⁸
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- 3199 Cortical Thinning and Subcortical Volume Decrease in HIV Positive Children with Encephalopathy**
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- 3200 Disability in Multiple Sclerosis: Is the Thalamus the Gray Eminence in this "White Matter Disease"?**
Michael Deppe¹, Julia Krämer¹, Jasmin Marinell¹, Jan-Gerd Tenberge², Heinz Wiendl¹, Sven Meuth¹
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- 3201 An ERP study of reward and loss processing in patients with borderline personality disorder**
Christina Andreou¹, Julia Kleinert¹, Michael Lipp², Nenad Polomac¹, Saskia Steinmann¹, Gregor Leicht¹, Christoph Mulert¹
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- 3202 End-stage renal dysfunction, cognition and resting state networks — an fMRI study**
Cornelius Werner^{1,2}, Ana Costa¹, Frances Tiffin-Richards¹, Shahram Mirzazade^{1,2,3}, Bernhard Holschbach⁴, Rolf Frank⁵, Athina Vassiliadou⁶, Thilo Krüger⁷, Frank Eitner⁷, Jürgen Flöge⁷, Jörg Schulz^{1,3}, Kathrin Reetz^{1,2}
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- 3203 Working memory in adults born preterm: Evidence for compensatory changes in posterior DMN function**
Marcel Daamen^{1,2}, Josef Bäuml^{3,4}, Lukas Scheef¹, Christian Sorg^{3,5,4}, Barbara Busch², Nicole Baumann⁶, Peter Bartmann², Dieter Wolke^{6,7}, Afra Wohlschläger^{3,4}, Henning Boecker¹
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- 3204 Functional Imaging in obese children responding to long-term sport therapy**
Michael Schmidt¹, Martin Lotze¹, Sabine Davids², Martin Domin¹, Katrin Thoms², Julia Wendt¹, Holger Hirschfeld¹, Alfons Hamm³, Heinz Lauffer¹
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- 3205 Affected/unaffected eye viewing effect on visual cortex GABA — fMRI correlation in optic neuritis**
Pallab Bhattacharyya¹, Mark Lowe¹, Bharath Atthe¹, Blessy Mathew¹, Robert Bermel¹
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- 3206 Cerebral Cortical Thickness, Cognitive Involvement and Clinical Features in Neuro-Behçet Patients**
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- 3207 Decreased functional network connectivity in aged people with severe white matter hyperintensities**
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- 3208 Evaluation of the corticospinal tract in ALS with a 4.7 T scanner using DTI and tractography**
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- 3209 A neurobehavioral account for individual resilience to military chronic stress**
Tamar Lin^{1,2}, Sharon Vaisvaser³, Eyal Fruchter⁴, Roei Admon⁵, Ilan Wald², Daniel Pine⁶, Yair Bar-Haim⁷, Talma Hendler^{1,2,8}
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- 3210 Transcutaneous Vagus Nerve Stimulation in Chronic Back Pain Patients: An fMRI Pilot Study**
Paul Reidler¹, Daniel Keeser^{1,2}, Ruth Ruscheweyh³, Dieter Göhmann⁴, Valerie Kirsch³, Andreas Straube³, Birgit Ertl-Wagner¹
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- 3211 Morphological brain network alterations in deaf adults assessed by cortical thickness**
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- 3212 Brain structural alterations of Congenital Fibrosis of the Extraocular Muscles type 1**
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- 3213 Parietal differences during nonsymbolic number comparison in children with prenatal alcohol exposure**
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- 3214 Connectivity of the Deep White Matter in Huntington's Disease**
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- 3215 Change of cortical neuronal activity in patients with acute transient global amnesia**
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- 3216 Cognitively enhanced pharmacological effect of Methylphenidate**
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- 3217 Association between waist-circumference and gray matter volume in 2,334 Individuals**
Deborah Janowitz¹, Katrin Hegenscheid², Henry Völzke³, Hans Grabe⁴, Norbert Hosten², Katharina Wittfeld⁵
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- 3218 Fibromyalgia is associated with decreased connectivity between pain- and sensorimotor areas**
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- 3219 White matter hyperintensities variation with age and grey matter changes in migraine with aura**
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- 3220 Basal ganglia functional connectivity alterations in multiple sclerosis patients with fatigue**
Carsten Finke¹, Alexander Brandt¹, Alina Freing², Sebastian Papazoglou¹, Friedemann Paul¹, Luisa-Maria Pech¹, Caspar Pfueller¹, Jeremias Schlichting¹, Carina Soemmer¹, Jens Würfel², Michael Scheel³
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- 3221 Neural correlates of cognitive flexibility in adolescent patients with anorexia nervosa**
Daniel Geisler¹, Franziska Neidel¹, Lea Scheuvers¹, Franziska Ritschel¹, Ilka Schober¹, Maria Seidel¹, Joseph King¹, Marion Breier¹, Luisa Flohr¹, Veit Roessner¹, Stefan Ehrlich¹
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- 3222 Depersonalization disorder: Subjective, physiological, and neural alterations in emotion regulation**
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- 3223 Functional connectivity changes reveal lesion- and compensation-related processes in ALS**
Kristian Loewe^{1,2}, Judith Machts³, Christian Stoppel^{1,4}, Susanne Abdulla^{1,3,5}, Katja Kollwe⁵, Petri Susanne⁵, Reinhard Dengler⁶, Hans-Jochen Heinze^{1,6}, Stefan Vielhaber^{1,3}, Mircea Ariel Schoenfeld^{1,6,7}
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- 3224 Abnormal resting-state brain connectivity in patients with Wilson's disease**
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- 3225 Volumetric and shape changes in the thalamus and putamen in Multiple Sclerosis**
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- 3226 Exploring the Fiber Tracts in Prader-Willi syndrome patients with TBSS of DTI**
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- 3227 Cerebellar-mediated Timing during Finger Tapping in Children with Fetal Alcohol Spectrum Disorder**
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- 3228 Pretreatment Multimodal MRI in Breast Cancer Patients**
Sanne Menning¹, Michiel de Ruiter¹, Willem Boogerd², Dick Veltman³, L. Reneman⁴, Sanne Schagen²
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- 3229 Neuronal correlates of altered own-face perception in body dysmorphic disorder**
Stefan Schweinberger¹, Franziska Krahmer¹, Viktoria Ritter², Ulrich Stangier², Holger Wiese¹
¹Friedrich Schiller University, Jena, Germany, ²Goethe University, Frankfurt, Germany
- 3230 Disease-related developmental changes of topological features in brain metabolic network in deafness**
Hyejin Kang¹, Eunkyung Kim¹, Hyekeyoung Lee¹, Hyo-Jeong Lee², Eunjoo Kang³, Seung-Ha Oh⁴, Dong Soo Lee⁴
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- 3231 Cortical thickness and subcortical volume in acute and recovered patients with anorexia nervosa**
Maria Seidel¹, Joseph King¹, Daniel Geisler¹, Gerit Pfuhl¹, Benjamin Roschinski¹, Juliane Petermann¹, Franziska Ritschel¹, Laura Soltwedel¹, Ilka Schober¹, Sabine Clas¹, Veit Roessner², Stefan Ehrlich¹
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- 3232 Disrupted white matter topological organization in elderly patients with type 2 diabetes**
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- 3233 Involuntary interference in emotion dysregulation: Amygdala hyper-modulation of brain networks**
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- 3234 Fear recognition impairment in autoimmune limbic encephalitis: a case study**
Alessandra Dodich^{1,2}, Chiara Crespi^{1,2}, Chiara Cerami^{1,2,3}, Alessandra Marcone³, Nicola Canessa^{1,2}, Andrea Falini^{1,4}, Stefano Cappa^{2,3,5}
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- 3235 Prenatal methamphetamine exposure is associated with smaller caudate volumes in neonates**
Fleur Warton¹, Ernesta Meintjes², Christopher Warton³, Christopher Molteno², André Van der Kouwe⁴, Pia Wintermark⁵, Joseph Jacobson⁶, Sandra Jacobson⁶
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- 3236 Default Mode Network Activation During Working Memory is Altered in Type 2 Diabetes Mellitus**
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- 3237 Resting state cortico-cerebellar networks are absent in MS Patients and pseudobulbar affect**
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- 3238 Generalized psychophysiological interaction for body image processing compared in related disorders**
Sarah Madsen^{1,2}, Teena Moody², Alex Zai², Paul Thompson¹, Jamie Feusner²
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- 3239 Neural correlates of implicit emotion regulation in patients with anorexia nervosa**
Franziska Ritschel¹, Joseph King¹, Daniel Geisler¹, Laura Soltwedel¹, Anne Schulze¹, Maria Seidel¹, Ilka Schober¹, Johannes Zipp¹, Jessica Weiss¹, Thomas Goschke², Veit Roessner¹, Stefan Ehrlich¹
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- 3240 Remote effects of hypothalamic lesions in the prefrontal cortex of craniopharyngioma patients**
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- 3241 A DTI-tractography study of newborns: white matter changes associated with prenatal alcohol exposure**
Paul Taylor^{1,2}, Joseph Jacobson³, J.W. van der Kouwe Andre⁴, Christopher Molteno⁵, Gang Chen⁶, Pia Wintermark⁷, Alkathafi Alhamud⁸, Ernesta M. Meintjes⁹, Sandra Jacobson³
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- 3242 Local topological properties of brain connectivity in minimally-disabled multiple sclerosis patients**
Djalel-Eddine Meskaldji^{1,2}, Markus Gschwind^{3,4,5}, Jonas Richiardi^{4,6}, Samanta Simioni³, Jean-Marie Annoni^{4,5,7}, Myriam Schluep³, Patrik Vuilleumier^{6,4}, Dimitri Van De Ville^{1,2}
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- 3243 Brain Networks Normalize with Treatment in Pediatric Complex Regional Pain**
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- 3244 Amygdala and Hippocampal Volumes in ADHD: The Importance of Sex**
Karen Seymour¹, Xiaoying Tang², Deana Crocetti³, Carrie Nettles⁴, Michael Miller⁵, Stewart Mostofsky⁶
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- 3245 Amygdala Hyperactivation to Angry Faces in Intermittent Explosive Disorder**
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- 3246 Longitudinal change of diffusion tensor in ALS correlated with clinical measure ALSFRS-R**
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- 3247 Structural Brain Irregularities in self identifying, non-incarcerated Pedophiles — a pilot VBM Study**
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- 3248 Sex-Dependent Basal Ganglia Abnormalities in Children with Attention Deficit Hyperactivity Disorder**
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- 3249 Prediction of cortical thickness from MWF imaging in Multiple Sclerosis**
Michael Dayan¹, Sandra Hurtado Rua², Kyoko Fujimoto³, Sneha Pandya¹, Elizabeth Monohan³, Amy Kuceyeski¹, Thanh Nguyen¹, Ashish Raj¹, Susan Gauthier³
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- 3250 Reduced local connectivity of the amygdala in body dysmorphic disorder**
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- 3251 Brain Activity under Emotional Conflicts in Adolescents that Classifies Familial History of SUD**
Jianping Qiao^{1,2}, Zhishun Wang², Joy Hirsch³, Lupo Geronazzo², Lawrence Amsel², Cristiane Duarte², George Musa², Jun Long⁴, Xiaofu He², Thao Doan², Christina W. Hoven²
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- 3252 Visual Processing in Anorexia Nervosa and Body Dysmorphic Disorder Using fMRI/EEG Joint Fusion ICA**
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3253 Multiple sclerosis risk gene associations with white matter integrity at 4 Tesla

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3257 Dopamine depletion leads to aberrant coordination across striatal, motor and cerebellar networks

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3258 Large-Scale Validation of a Computer-Aided Quantification for 123I-FP-CIT Images

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PARKINSON'S DISEASE AND MOVEMENT DISORDERS**3254 Anterior temporal atrophy and posterior progression in patients with Parkinson's disease**

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3259 L-DOPA increases right inferior fronto-parietal coupling with the sensorimotor network in Parkinson

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3255 Aberrant functional connectome in tremor-dominant patients with parkinson's disease

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3260 Reduced cortical thickness in patients with Parkinson's disease

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3256 Predictive Models of Atomoxetine and Citalopram's Effects on Motor Inhibition in Parkinson's Disease

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- 3261 Diffusion-Tensor Imaging in patients with pure hereditary spastic paraplegia**
Martina Minnerop^{1,2}, David Moussavi Biuki², Heike Jacobi², Sandra Röske³, Jan-Christoph Schöne-Bake^{4,5}, Marc Tittgemeyer⁶, Katrin Amunts^{1,7}, Thomas Klockgether^{2,8}, Bernd Weber^{9,4}
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- 3262 Rs-fMRI to the primary motor area differs by time-to-onset in prodromal Huntington's Disease**
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- 3263 Altered Rich Club Organisation in Pre-manifest Huntington's Disease using Diffusion MRI**
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- 3264 Diffusion tensor MRI of the cingulum bundle relates to cognitive function in multiple sclerosis**
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- 3265 Functional activation in the thalamus is related to cognition in MS**
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- 3266 Structural connectivity abnormalities with Parkinson's disease using tract-based spatial statistics**
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- 3267 Degeneration of cerebello-pallidal and nigro-putaminal projections in Parkinson's disease**
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- 3268 Microstructural white matter changes underlying cognitive impairments in ALS — a DTI study**
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- 3269 Intrinsic functional connectivity with Parkinson rating in relevance to asymmetric motor symptoms**
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- 3273 Response inhibition in Parkinson's disease: modulating frontal-subcortical connectivity by NA & 5HT**
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- 3277 Plasticity in the cerebro-cerebellar network of visuomotor control in ataxia patients**
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- 3279 Beyond volume conduction: toward genuine functional connectivity between bilateral basal ganglia**
Friederike Hohlefeld¹, Christine Huchzermeyer², Julius Huebl², Gerd-Helge Schneider³, Christof Brücke², Thomas Schönecker², Andrea Kühn⁴, Gabriel Curio⁵, Vadim Nikulin⁵
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- 3281 Visual system integrity and cognition in early Huntington's disease**
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Thomas Foki¹, Walter Pirker², Alexander Geissler¹, Dietrich Haubenberger², Markus Hilbert¹, Ilse Höllinger¹, Moritz Wurnig¹, Jakob Rath¹, Johann Lehrner², Eva Matt¹, Florian Fischmeister¹, Siegfried Trattnig³, Eduard Auff², Roland Beisteiner¹
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- 3303 Cortical Thickness Thinning and Cognitive Impairment in Parkinson's Disease without Dementia**
Lijun Zhang¹, Nicholas Sterling¹, Ming Wang¹, EunYoung Lee¹, Paul Eslinger¹, Daymond Wagner¹, Guangwei Du¹, Michelle Lewis¹, Xuemei Huang¹
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- 3323 The affect of perinatal stroke on spatial orientation**
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- 3324 Computational assessment of the variability of vascular territories on brain MRI of stroke patients**
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- 3325 A partial least squares approach for linking structural network disruption to dysfunction in stroke**
Amy Kuceyeski¹, Mark Villanueva¹, Ashish Raj¹, Michael O'Dell¹, Joan Toglia²
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- 3326 Extensive Functional Impairment of Ischemic Stroke: Default Mode Network Study Using fMRI**
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- 3327 Everything our Brain can Do with Objects — from Recognition to Utilisation**
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- 3328 Cognitive Recovery in Stroke Patients is Associated to Different Anatomical Connectivity Patterns**
Rosalía Dacosta-Aguayo¹, Manuel Graña², Yasser Iturria-Medina³, Alexandre Savio⁴, Marina Fernández-Andújar¹, Elena López-Cancio⁵, Cynthia Cáceres⁵, Núria Bargalló⁶, Maite Barrios¹, Imma Clemente¹, Monica Millan⁵, Guillem Pere Toran⁷, Rosa Fores Sas⁷, Antoni Davalos⁵, Maria Mataro¹
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- 3329 The neural enhancement in aphasic patients after melodic intonation therapy: a DTI study**
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- 3330 Machine learning classification of early imaging markers to predict motor disability after stroke**
Anne Rehme¹, Lukas Volz², Simon Eickhoff³, Delia-Lisa Feis⁴, Gereon Fink⁵, Christian Grefkes⁶
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- 3331 Changes in task based effective connectivity following language rehabilitation in aphasia**
Swathi Kiran¹, Janelle Jorgensen¹, Melody Lo¹, Kushal Kapse¹
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- 3332 Language Networks in English-Spanish bilinguals with and without aphasia**
Swathi Kiran¹, Teresa Gray¹, Stephanie Salcedo¹, Kushal Kapse¹
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- 3333 Structure and function of transcallosal pathways is related to motor impairment in chronic stroke**
Cameron Mang¹, Michael Borich², Sonia Brodie¹, Nicholas Snow³, Lara Boyd¹
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- 3334 Disrupted white-matter topological organization in elderly patients with essential hypertension**
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- 3335 Relation between brain lesion and muscle synergies activation in stroke patients**
Andrea Turolla^{1,2}, Stefano Silvoni², Michela Agostini², Clara Genna^{3,2}, Davide Cattin^{4,2}, Paolo Tonin², Annalena Venneri⁵
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- 3336 Same intervention-Different reorganization: Impact of lesion location on training touch after stroke**
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- 3337 Motor resonance within impaired motor system: decoding action and effector specific patterns**
Karine Gazarian¹, Tobias Wiestler¹, Marco Davare¹, Ella Clark¹, Khadija Rantell¹, Joern Diedrichsen¹, Nick Ward¹
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- 3338 Large-scale EEG phase synchrony associated with functional recovery after ischemic stroke**
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- 3339 Dynamic lesion correlates of somatosensory function recovery after cortical sensorimotor stroke**
Eugenio Abela^{1,2}, Franziska Stauffacher^{1,3}, John Missimer⁴, Andrea Federspiel⁵, Matthias Sturzenegger⁶, Chrisitan Hess², Roland Wiest¹, Bruno Weder¹
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- 3340 Effective Connectivity during Paretic Hand Movements after Stroke: Effect of Side of Brain Damage**
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- 3341 Cortical Reorganization Pathways Using fMRI in Stroke Following Upper Limb's Electrical Stimulation**
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- 3342 Effect of Hemodynamic Factors on Event-Related Bold Response in Post-stroke Patients**
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- 3343 Mapping stroke lesion impact on clinical outcome measured by the modified Rankin Scale**
Bastian Cheng¹, TH Cho², J Fiehler³, C Gerloff⁴, A Golsari⁴, S Pedraza⁵, G Thomalla⁴, M Zavaglia⁶, Nils Daniel Forkert⁷, Claus Hilgetag⁸, Jean-Claude BARON⁹, Leif Ostergaard¹⁰
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- 3344 Restoration of interhemispheric perfusion balance predicts successful recovery from cortical stroke**
Eugenio Abela¹, Roland Wiest², John Missimer³, Matthias Sturzenegger⁴, Christian Hess⁵, Andrea Federspiel⁶, Bruno Weder⁷
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- 3345 Theta burst transcranial magnetic stimulation in subacute stroke: an fMRI study**
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- 3346 Contralateral corticospinal tract integrity correlates with NIH Stroke Score: a stroke DTI study**
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- 3347 Functional re-organization of primary & premotor Cortices in well-recovered chronic stroke Patients**
Benedikt Taud¹, Jasmine Brecht¹, Dorothee Sophie Werder¹, Mira Sieg¹, Laura Nachtigall¹, Marcus Meinzer¹, Agnes Flöel², Robert Lindenberg¹
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- 3348 Motor recovery after stroke is characterized by ipsilesional primary motor cortical activity**
Isabelle FAVRE¹, Olivier Detante¹, Thomas Zeffiro², Alexandre Krainik³, Marc HOMMEL⁴, Assia JAILLARD HOMMEL⁴
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- 3349 Critical lesions in neglect described from a game-theoretical analysis perspective**
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- 3350 Post-stroke upper limb skill acquisition is related to excitability of ipsilesional motor cortex**
Bimal Lakhani¹, Katie Wadden¹, Michael Borich², Cameron Mang¹, Lara Boyd¹
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- 3351 Neuro-biochemical relationship in chronic stroke motor skill acquisition responders**
Katie Wadden¹, Bimal Lakhani², Irene Vavasour¹, Lara Boyd³
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- 3352 Initial observations into functional mechanisms of chronic stroke: Modeling with The Virtual Brain**
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- 3353 Mapping causal functional contributions derived from the clinical evaluation of stroke lesions**
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- 3354 Automatic and Fast Determination of AIF on the MCA in PWI of Patients with Acute Stroke**
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- 3355 The effect of language training on post-stroke aphasia: an fMRI study**
Rodolphe Nenert¹, Jane Allendorfer¹, Amber Martin², Christi Banks³, Jennifer Vannest⁴, Aimee Dietz³, Scott Holland⁵, Jerzy Szaflarski²
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- 3356 Altered resting-state network connectivity in stroke patients with and without apraxia of speech**
Donald Robin¹, Kirrie Ballard², Joeseph Duffy³, Malcolm McNeil⁴, Olivier Piguet⁵, Simon Eickhoff⁶, Amy Parkinson⁷
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- 3357 Microstructural Disconnection of Brain Related to Interruption of Addictive Behavior for Smoking**
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- 3358 Evolution of language lateralization in the first year after stroke — A longitudinal study**
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- 3359 Increased language activation during verb generation fMRI following aphasia therapy in LMCA stroke**
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- 3360 Neuroplasticity Based on Functional Connectivity in Stroke Patients Following 24-hr Rehabilitation**
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- 3361 Post-Revascularization Recovery of Cerebrovascular Reactivity in Moyamoya Disease**
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Genetics

GENETIC ASSOCIATION STUDIES

- 3362 Oxytocin receptor gene polymorphism and racial in-group bias in brain activity to others' suffering**
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- 3363 Genome-wide search implicates a potassium channel gene in cognitive performance in the elderly**
Thomas Mühleisen^{1,2,3}, Silke Lux¹, Stefan Lenzen¹, Tatsiana Vaitsiakhovich⁴, Svenja Caspers¹, Axel Schleicher¹, Christiane Jockwitz¹, Kerstin Jütten¹, Per Hoffmann^{1,5,2,3}, Noreen Pundt⁶, Susanne Moebus⁶, Karl-Heinz Jöckel⁶, Raimund Erbel⁷, Holger Schütz¹, Vincent Gras¹, Ulrich Mödder¹, Andreas Bauer^{1,8}, Dieter Sturma^{1,9}, Jon Shah^{1,10,11}, Karl Zilles^{1,11,12}, Tim Becker^{13,4}, Katrin Amunts^{1,11,14}, Sven Cichon^{1,5,2,3}
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- 3364 OPRM1 differentially affects functional connectivity of ventral striatum in smokers and non-smokers**
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- 3365 Genome-wide Association Analysis with Hippocampal Shape: An ADNI Cohort Study**
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- 3366 The impact of an obesity-predisposing FTO gene variant on visual food perception in the human FFG**
Delia-Lisa Feis¹, Anne B. Kühn¹, Leonhard Schilbach², Lutz Kracht¹, Jan Mauer¹, Jens C. Brüning¹, Marc Tittgemeyer¹
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- 3367 SNAP25 Gene Associated With Working Memory and Resting State Brain Activation in Chinese Adults**
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- 3368 Development of imaging protocol to study effects of LPA polymorphisms in the Old Order Amish**
Susan Wright¹, Chimdi Ego-Osuala², Mao Fu³, Theresa Roomet³, Alan Shuldiner³, Elliot Hong⁴, Peter Kochunov⁵
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- 3369 Influence of 5-HT on amygdala connectivity: genetic variations and pharmacological modulation**
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3370 Genome-wide linkage analysis of resting state functional connectivity

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3371 Effect of the BDNF on Regional Gray Matter Volumes and Cognitive Function in the Chinese Population

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3372 PBRM1 polymorphism and white matter microstructure

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3373 A genome-wide supported risk SNP of MAD1L1 modulates activation and modulation of the reward system

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- 3374** **Reactivity and connectivity of the amygdala moderate the influence of the 5-HTTLPR on neuroticism**
Jan Schweckendiek¹, Tim Klucken¹, Carlo Blecker², Bertram Walter², Yvonne Kuepper¹, Juergen Hennig¹, Rudolf Stark¹
¹Justus Liebig University, Giessen, Germany, ²Bender Institute of Neuroimaging, Giessen, Germany
- 3375** **A novel gene-gene interaction associated with altered D2R-dependent brain and behavioral responses**
Meltem Sevgi¹, Yuko Nakamura², Anne Kuehn³, Jan Mauer³, Leonhard Schilbach⁴, Martin Hess³, Jenia Jitsev³, Theo Gruendler⁵, Markus Ullsperger⁶, Paul Geha², Dana Small², Marc Tittgemeyer³, Jens Brüning³
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- 3376** **Oxidative stress regulating gene GPX1 associated with regional brain volumes in the elderly (N=740)**
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- 3377** **Genome-Wide Analysis Reveals a Polymorphism Linked to Cost-Efficient Wiring of Functional Networks**
Andre Altmann¹, Anna-Clare Milazzo¹, Jean-Baptiste Poline^{2,3}, Michael Greicius¹, Consortium IMAGEN⁴
¹Stanford University, Stanford, United States, ²University of California at Berkeley, Berkeley, United States, ³Neurospin, I2BM, CEA2, France, ⁴-, -, —
- 3378** **Genetic Variation in CNTNAP2 and Cerebral Response to Human Voice Perception**
Michihiko Koeda¹, Atsushi Watanabe², Yumiko Ikeda³, Amane Tateno¹, Hidenori Suzuki³, Yoshiro Okubo¹
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- 3379** **Genome-wide association study of cerebellar volume and implications in neuropsychiatric disorders**
Min Tae Park¹, Sejal Patel^{2,3}, Aristotle Voineskos^{1,4}, Jo Knight^{2,3,4}, Mallar Chakravarty^{1,4,5}, The ADNI⁶
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- 3380** **Effects of genome-wide supported psychosis risk variant in ITIH3/H4 on striatal reward anticipation**
Oliver Grimm¹, Leila Haller², Andreas Heinz³, Henrik Walter⁴, Peter Kirsch¹, Susanne Erk⁵, Michael Plichta¹, Nina Seiferth⁶, Lydia Pöhlend⁵, Sebastian Mohnke⁵, Thomas Mühleisen⁷, Manuel Mattheisen⁸, Stephanie Witt¹, Axel Schäfer⁹, Sven Cichon¹⁰, Markus Nöthen⁷, Marcella Rietschel¹, Heike Tost¹, Andreas Meyer-Lindenberg¹
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- 3381** **DCDC2 Polymorphism is Associated with Cortical Thickness in the Left Supramarginal and Angular Gyri**
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- 3382** **Influence of Brain-derived Neurotrophic Factor Genetic Polymorphism on White Matter Integrity in Stroke**
Yun-Hee Kim¹, EUN-JIN KIM², Chang-hyun Park¹, Won Hyuk Chang¹, Ahee Lee¹, Oh-young Bang³
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- 3383 Genetic susceptibility affects brain structure in heroin addiction patients**
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- 3384 Additive Gene-Environment Effects on Hippocampal Structure in Healthy Humans**
Ulrich Rabl¹, Bernhard Meyer², Kersten Diers³, Lucie Bartova¹, Andreas Berger¹, Dominik Mandorfer², Ana Popovic⁴, Christian Scharinger¹, Julia Huemer¹, Klaudius Kalcher⁵, Gerald Pail¹, Helmuth Haslacher¹, Thomas Perkmann¹, Christian Windischberger⁶, Burkhard Brocke³, Harald Sitte¹, Daniela Pollak², Jean-Claude Dreher⁷, Siegfried Kasper⁴, Nicole Praschak-Rieder⁴, Ewald Moser⁵, Harald Esterbauer¹, Lukas Pezawas⁸
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- 3385 Common Genetic Factor Underlying Distinct Brain Network Characteristics**
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- 3386 Serotonin transporter gene methylation is associated with hippocampal gray matter volume**
Udo Dannlowski¹, Christa Hohoff², Ilona Schneider², Ronny Redlich³, Nils Opel⁴, Dominik Grotegerd⁵, Harald Kugel⁶
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- 3387 Oppositional COMT Val158Met Effects on Functional Connectivity in Adolescents and Adults at Rest**
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- 3388 Differential Effects of DRD2-Taq1A on reward anticipation and hippocampal activity in a reward task**
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- 3389 Genetic variation of RasGRF1 regulatory region affects human hippocampus-dependent memory processes**
Björn Schott¹, Martin Zenker², Adriana Barman³, Anne Assmann⁴, Sylvia Richter⁵, Joram Soch⁶, Hartmut Schütze⁷, Torsten Wüstenberg⁸, Anni Richter⁹, Emrah Düzel¹⁰, Constanze Seidenbecher¹
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- 3391 Gene-based Test of MACROD2 Reveals Associations with White Matter Integrity in Healthy Young Adults**
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- 3392 Genomic architecture of human neuroanatomical diversity**
Roberto Toro¹, Guillaume Huguet¹, Jean-Baptiste Poline², Eva Loth³, Vincent Frouin², Tobias Banaschewski⁴, Gareth Barker⁵, Arun Bokde⁶, Christian Büchel⁷, Fabiana Carvalho⁸, Patricia Conrod⁹, Mira Fauth-Bühler⁴, Jürgen Gallinat⁹, Hugh Garavan¹⁰, Penny Gowland¹¹, Andreas Heinz⁹, Bernd Ittermann¹², Claire Lawrence¹¹, Herve Lemaitre¹³, Frauke Nees¹⁴, Tomas Paus¹⁵, Zdenka Pausova¹⁶, Marcella Rietschel⁴, Trevor Robbins¹⁷, Michael Smolka¹⁸, Andreas Ströhle¹⁹, Gunter Schumann⁵, Thomas Bourgeron²⁰
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- 3393 Network properties of resting EEG associated with ZNF804A polymorphism: A graph theoretical analysis**
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- 3394 Motor Impulsiveness and Sensitivity to Punishment differentiate between gene gene interactions**
A. Katharina Schmitz¹, Jens C. Brüning¹, Marc Tittgemeyer¹
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- 3395** **Variability in brain evoked activity elicited by warning cue and polymorphisms of BDNF and COMT gene**
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- 3396** **Catechol-O-methyltransferase Gene and White Matter Integrity in Cognitively Normal Older Adults**
Yang Jiang¹, David Powell², Gregory Jicha³, Frederick Schmitt², Richard Kryscio², Anders Andersen², Lee Blonder², Steven Estus², Charles Smith⁴, Robert Lipsky⁵
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- 3397** **Newborn Resting-State Activities and Emotion Networks Differ by the 5-HTTLPR Polymorphism**
Jianping Qiao^{1,2}, Zhishun Wang², Catherine Monk², Jay Gingrich², William Fifer², Michelle Gilchrist², Michael Myers², Myrna Weissman², Bradley S. Peterson²
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- 3398** **Effect of COMT Val158Met polymorphism on white matter lesions and cognition in Chinese population**
Yi-Hua Huang¹, Chu-Chung Huang², Mu-En Liu³, Albert C. Yang⁴, Kun-Hsien Chou⁵, Chia-Wei Sun⁶, Shih-Jen Tsai⁷, Ching-Po Lin⁸
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GENETIC MODELING AND ANALYSIS METHODS

- 3399** **A longitudinal study of brain volume heritability in older adults: the Older Australian Twins Study**
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- 3400** **Replication of genetic associations for white matter using Mega-Genetic Analysis and ENIGMA-DTI**
Peter Kochunov¹, Neda Jahanshad², Emma Sprooten³, Charles Peterson⁴, David Goldman⁵, Ahmad Hariri⁶, Colin Hodgkinson⁵, Lorna Lopez⁷, Nicholas Martin⁸, Douglass Williamson⁹, Susan Wright¹⁰, Yihong Yang¹¹, René Mandl¹², Thomas Nichols¹³, Joanna Curran¹⁴, Bennett Landman¹⁵, Herve Lemaitre¹⁶, Elliot Hong¹⁷, Elliot Stein¹⁸, Jessika Sussmann¹⁹, Joanna Wardlaw²⁰, Katie McMahon²¹, Greig de Zubicaray²², Andrew MCINTOSH¹⁹, Mark Bastin¹⁹, Ian Deary¹⁹, Hilleke Hulshoff Pol²³, David Glahn³, Paul Thompson²⁴, Margaret Wright²⁵, John Blangero²⁶
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- 3401 Genetic distance within human populations and cerebral white matter microstructure: Enigma-DTI study**
Peter Kochunov¹, Neda Jahanshad², Emma Sprooten³, Douglass Williamson⁴, Ahmad Hariri⁵, Colin Hodgkinson⁶, David Goldman⁶, Elliot Hong⁷, Elliot Stein⁸, Greig Zubicaray⁹, Katie McMahon¹⁰, Nicholas Martin¹¹, Susan Wright¹², John Blangero¹³, Paul Thompson¹⁴, David Glahn³
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- 3402 Heritability of Brain Structure, Function, and Connectivity in Human Connectome Project Data**
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- 3403 Fast Accurate Heritability Screening Using Whole-genome Data**
Tian Ge¹, Erin Dickie², Amir Tahmasebi², Tobias Banaschewski³, Gareth Barker⁴, Arun Bokde⁵, Christian Büchel⁶, Patricia Conrod⁴, Herta Flor³, Andreas Heinz⁷, Hugh Garavan⁸, Penny Gowland⁸, Bernd Ittermann⁹, Claire Lawrence¹⁰, Karl Mann³, Jean-Luc Martinot¹¹, Frauke Nees³, Mark Lathrop¹², Eva Loth⁴, Zdenka Pausova¹³, Marcella Rietschel³, Michael Smolka¹⁴, Andreas Ströhle⁷, Jürgen Gallinat⁷, Gunter Schumann⁴, Tomas Paus², Thomas Nichols¹⁵, IMAGEN Consortium¹⁶
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- 3404 Fast and Powerful Multiple Testing Inference in Family-Based Heritability Studies**
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- 3405 Genetics of human brain white matter and anatomical network in adolescence**
Shuwei Liu¹, Haitao Ge¹, Junhai Xu¹, Yuchun Tang¹, Wenjian Xu², Zengchang Pang³
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- 3406 Genetic and age related variance of resting-state functional connectomes**
Francois Chouinard-Decorte¹, Yassine Benhajali², Alan Evans³, Jack Kent⁴, Melanie Carless⁵, Joanne Curran⁴, Thomas Dyer⁵, Harald Göring⁶, Rene Olvera⁷, Peter Fox⁸, Laura Almasy⁹, Ravi Duggirala⁵, John Blangero⁵, David Glahn¹⁰, Pierre Bellec¹¹
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- 3407 Permuted Voxelwise Genome-Wide Association Studies on GPU**
Benoit DaMota¹, Jinpeng Li², Marie Cadenne¹, Vincent Ducrot¹, Edouard Duchesnay², Sebastien Monot¹, Vincent Frouin²
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- 3408 The homogeneity of genetic effects on fractional anisotropy across white matter regions**
Emma Sprooten¹, Reese McKay¹, Emma Knowles¹, Marcio de Almeida², Jack Kent², Anderson Winkler³, Melanie Carless², Joanne Curran², Thomas Dyer², Harald Göring², Rene Olvera⁴, Peter Kochunov⁵, Peter Fox⁶, Ravi Duggirala², Laura Almasy², John Blangero², David Glahn¹
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- 3409 A Method for Fast Whole-brain Aggregate Heritability Estimation**
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- 3410 APACE: Accelerated Permutation Inference for the ACE Model**
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- 3411 Tight fitting genes: Finding relations between statistical maps and gene expression patterns**
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- 3412 Using meta and mega analyses to find heritability estimates from 2203 scans — from ENIGMA-DTI**
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- 3413 Heritability and lateralized genetic influence of brain structures in a population aged over 65**
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NEUROGENETIC SYNDROMES

- 3414 A dopamine transporter variant predicts dementia risk, cognitive decline, and ventricular expansion**
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- 3415 A RASGRF2 variant predicts larger cortical volumes but faster ventricular expansion in the elderly**
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- 3416 Neural network deficits in neurofibromatosis 1**
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- 3417 Reduced DMN Functional Connectivity in Ornithine Transcarbamylase Deficiency and Working Memory**
Ileana Pacheco-Colón^{1,2}, Stuart Washington^{1,2}, John VanMeter^{1,2}, Andrea Gropman^{3,1,4,5}
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- 3418 Influence of glucocorticoid receptor polymorphism on gaze avoidance in Fragile X syndrome**
David Hong¹, Allan Reiss², Sharon Shrestha²
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- 3419 The effect of sex chromosome dosage on brain asymmetry in cortical thickness**
Amy Lin¹, Nancy Raitano Lee¹, Liv Clasen¹, Jonathan Blumenthal¹, Francois Lalonde¹, Jay Giedd¹, Armin Raznahan¹
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- 3420 Reduced cortical complexity in children with Prader-Willi syndrome**
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- 3421 Structural small worldness is altered in 22q11.2 deletion syndrome: validation using two datasets**
Julio Villalon Reina¹, Kristian Eschenburg¹, Maria Jalbrzikowski², Leila Kushan², Talia Nir¹, Neda Jahanshad¹, Paul Thompson¹, Tony Simon³, Carrie Bearden²
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- 3422 Integrity of the Structural Connectome In Turner Syndrome**
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Modeling and Analysis Methods

BAYESIAN MODELING

- 3423 The neural dynamics of Bayesian model updating in the somatosensory system**
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- 3424 The HGF toolbox for computational neuroimaging studies of decision-making and learning**
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- 3425 Bayesian inference for heteroscedastic Rician time series with applications to fMRI**
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- 3426 Updating Beliefs in a Hidden Cause Task**
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- 3427 Dynamic Causal Modeling of brain electrical responses in visual oddball paradigm**
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3428 Layers of Abstraction: Neurocomputational Models of Learning Local & Global Statistical Regularities
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3429 Bayesian estimation of multiple static dipoles from a time series of MEG data
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3430 Smoothed dipolar estimates in MEG
Valentina Vivaldi¹, Alberto Sorrentino², Michele Piana¹
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3431 Learning optimal spatiotemporal filtering for fMRI data using Gaussian Processes
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CLASSIFICATION AND PREDICTIVE MODELING

3432 Resting-state fMRI connectomics associate with behaviour, cognitive skills and emotions
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3433 Using SVM Classification on Structural Brain Images of Preterm-Born Teenagers as a Biological Marker
Carlton Chu¹, Hugo Lagercrantz², Hans Forssberg³, Zoltan Nagy⁴
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3434 Classification of Multiple Sclerosis Patients from the Geometry & Texture of White Matter Lesions
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3435 Graph-based inter-subject pattern analysis of fine scale fMRI maps
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3436 Detecting, Avoiding & Eliminating Confounds in MVPA / Decoding Studies
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3437 Predicting aphasia type from brain damage measured with structural MRI
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3438 Multi-scale decoding of Alzheimer's disease based on wavelet-transformed MR images
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- 3439 Predicting Temporal Progression of Alzheimer's Disease using Hippocampus Surface-based Features**
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- 3440 EEG-based Emotion Classification based on Inter-subject Information**
Yuan-Pin Lin¹, Tzyy-Ping Jung²
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- 3441 Diagnosis of Alzheimer's disease using multimodal analysis of FDG-PET and structural MRI**
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- 3442 Signatures of perceptual learning in resting state fMRI revealed by pattern recognition analysis**
Roberto Guidotti^{1,2}, Cosimo Del Gratta^{1,2}, Antonello Baldassarre^{1,2,3}, Gian Luca Romani^{1,2}, Maurizio Corbetta^{1,3}
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- 3443 Comparison of different LDA methods in decoding brain states on fMRI data**
Maogeng Xia^{1,2,3}, Sutao Song⁴, Xia Wu⁵, Li Yao^{1,5}, Zhiying Long^{1,2,3}
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- 3444 Gray Matter Anomalies Detection via Multivariate Feature Selection: Classification of Schizophrenia**
Eduardo Castro¹, Cota Navin Gupta¹, Vince Calhoun¹, Jessica Turner²
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- 3445 Sparse Logistic Regression Classifier Enables Diagnosing ADHD with High-Precision Based on fMRI Data**
Rubi Hammer¹, Reza Borhani², Mark Stein³, Aggelos Katsaggelos², James Booth¹
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- 3446 Integration of Multi-Level Features For Post-Traumatic Stress Disorder Classification**
Feng Liu¹, Yifeng Wang¹, Zhiliang Long¹, Ling Zeng¹, Huafu Chen¹
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- 3447 Dissimilarity based Extraction of Covariance Linked Network (DECLINE) features**
Pradeep Reddy Raamana¹, Lei Wang², Mirza Faisal Beg¹
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- 3448 An information-based fMRI analysis of intelligible Chinese speech**
Bingjiang Lyu^{1,2}, Jianqiao Ge^{1,2}, Jia-Hong Gao^{1,2}
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- 3449 Reconstructing musical audio features from continuous single-trial EEG**
Jessica Thompson¹, Michael Casey²
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- 3450 An EEG diagnosis of schizophrenia: multivariate pattern recognition of mismatch responses**
Marta Garrido¹, Natasha Matthews², Maria Rosa³, Juanita Todd⁴, Patricia Michie⁵
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- 3451 Fusion of FMRI-sMRI-EEG by Ensemble Feature Selection Improves Classification of Schizophrenia**
Jing Sui^{1,2}, Hao He¹, Yuhui Du^{1,3}, Qingbao Yu¹, Jiayu Chen¹, Eduardo Castro⁴, David Bridwell¹, Godfrey Pearlson⁵, Vince Calhoun^{1,4}
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- 3452 Identifying brain regions associated with task performance in a complex virtual environment**
Andrew Floren¹, Bruce Naylor¹, Risto Miikkulainen¹, David Ress¹
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- 3453 The effect of spatial resolution on decoding accuracy in fMRI multivariate pattern analysis**
Anna Gardumi¹, Lars Hausfeld¹, Dimo Ivanov¹, Elia Formisano¹, Kamil Uludağ¹
¹Maastricht University, Maastricht, Netherlands
- 3454 Bayesian multi-task learning for decoding whole-brain neuroimaging data**
Andre Marquand¹, Maria Rosa¹, Michael Brammer², Steve Williams¹, Orla Doyle³
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- 3455 Changes in Brain Perfusion Detected with Automatic Classification of First Episode Psychosis**
Letizia Squarcina¹, Cinzia Perlini¹, Denis Peruzzo¹, Umberto Castellani¹, Veronica Marinelli¹, Marcella Bellani¹, Gianluca Rambaldelli¹, Antonio Lasalvia¹, Sarah Tosato¹, Katia De Santi¹, Roberto Cerini², Roberto Pozzi Mucelli¹, Mirella Ruggeri¹, Paolo Brambilla³
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- 3456 Changing the brain's functional architecture with cognitive behavioral therapy**
Karin Jensen¹, Guillermo Cecchi², Martin Ingvar³, Diana Kadetoff³, Mike Kemani³, Eva Kosek³, Gunnar Olsson³, Charles Peck², Irina Rish², Rikard Wicksell³
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- 3457 Mapping cognitive ontologies to and from the brain**
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- 3458 Ordinal regression for predicting conversion to Alzheimer's disease**
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- 3459 Predicting Negative Affect from patterns of brain activation to threat stimuli**
Liana Portugal^{1,2}, Orlando Fernandes Junior², Rita de Cassia Alves², Tiago Sanchez³, Eliane Volchan³, Mirtes Pereira², Leticia Oliveira⁴, Janaina Mourao-Miranda⁵
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- 3460 Deep learning models for brain imaging: model depth enhances discovery power**
Sergey Plis¹, R Devon Hjelm², Ruslan Salakhutdinov³, H. Bockholt⁴, Jeffrey Long⁵, Hans Johnson⁵, Jane Paulsen⁶, Jessica Turner⁷, Vince Calhoun⁸
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- 3461 Predicting Ages of Healthy Old Adults Based on Patterns of Time-Average T2-Weighted MRI Images**
Minh Nguyen Nhat To¹, Trinh Nguyen², Michelle Voss³, Arthur Kramer⁴, Loan Vo^{2,4}
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- 3462 Using Pattern Classification Methods in sMRI Images to Differentiate Between Psychiatric Disorders**
Sebastian von Salderm¹, Carlos Cabral², Lana Marija Kambeitz-Illankovic², Nikolaos Koutsouleris²
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- 3463 Preterm infant brain pathology revealed in individuals by voxel ranking against a normal term atlas**
David Alexander Dickie¹, Dominic Job¹, Sarah Sparrow¹, Chinthika Piyasena¹, Graham Wilkinson¹, Joanna Wardlaw¹, James Boardman¹
¹The University of Edinburgh, Edinburgh, United Kingdom
- 3464 Can we interpret linear kernel machine learning models using anatomically labelled regions?**
Jessica Schrouff¹, Joao Monteiro², Maria Joao Rosa³, Liana Portugal², Christophe Phillips⁴, Janaina Mourao-Miranda²
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- 3465 Classification of Visuomotor Workload: A Comparison of State-of-the-Art Spatial Filtering Methods**
Matthias Schultze-Kraft¹, Sven Dähne², Gabriel Curio³, Benjamin Blankertz⁴
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- 3466 A new cross-validation technique for active-voxel detection methods based on groups of voxels**
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- 3467 Lesion-based ischemic stroke functional outcome prediction using a multi-class SVM**
Nils Daniel Forkert¹, T Verleger², Bastian Cheng³, G Thomalla⁴, J Fiehler⁵
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- 3468 Normalized Canonical Correlation for Detection of Steady-State Visual Evoked Potential**
Chun-Shu Wei¹, Yuan-Pin Lin¹, Yijun Wang¹, Masaki Nakanishi², Yu-Te Wang¹, Tzyy-Ping Jung¹
¹University of California, San Diego, California, United States, ²Graduate School of Science and Technology, Keio University, Yokohama, Japan
- 3469 Brain mapping in decoding: identifying predictive regions from fMRI with sparse total variation**
Gael Varoquaux¹, Alexandre Gramfort², Elvis Dohmatob¹, Bertrand Thirion¹
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- 3470 Decoding the spatial scale of information in visual cortex**
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- 3471 Characterizing functional specialization in the brain using large-scale classification of fMRI data**
Alejandro De La Vega¹, Tal Yarkoni²
¹University of Colorado — Boulder, Boulder, United States, ²University of Texas — Austin, Austin, United States
- 3472 A “guided searchlight” approach in classifying amnesic mild cognitive impairment patients**
Valeria Kebets^{1,2}, Mitsouko VAN ASSCHE^{1,2}, Rachel GOLDSTEIN^{1,2}, Marian Van der Meulen^{1,2}, Patrik Vuilleumier¹, Jonas Richiardi^{3,1,4}, Dimitri Van De Ville⁵, Frederic ASSAL⁶
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- 3473** **Revealing sex differences in human brain structural connectome using multivariate pattern analysis**
Zaixu Cui¹, Yong He¹, Gaolang Gong¹
¹State Key Laboratory of Cognitive Neuroscience and Learning & IDG/McGovern, Beijing Normal University, Beijing, China
- 3474** **Stabilization of Activation Patterns for Motor Imagery in Real-time fMRI**
Dongha Lee^{1,2}, Changwon Jang^{1,2}, Jong Doo Lee^{1,2}, Hae-Jeong Park^{1,3}
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- 3475** **Brief mental training reorganizes large-scale brain networks**
tang Yan¹, Yi-Yuan Tang²
¹CSU, Changsha, China, ²Texas Tech University, Lubbock, United States
- 3480** **Potential impact of Prospective vs Retrospective Motion Correction in a Longitudinal Study**
Martha Holmes¹, Muhammad Saleh¹, A. Alhamud¹, Paul Taylor¹, Barabara Laughton², Andre J.W. van der Kouwe³, Ernesta Meintjes¹
¹MRC/UCT Medical Imaging Research Unit, Department of Human Biology, University of Cape Town, Cape Town, South Africa, ²Children's Infectious Diseases Clinical Research Unit, Stellenbosch University, Stellenbosch, South Africa, ³Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Charlestown, MA, United States
- 3481** **SLice-Oriented MOTion COrrrection (SLOMOCO), a new method to correct slice-wise motion for BOLD MRI**
Erik Beall¹, Mark Lowe¹
¹Cleveland Clinic, Cleveland, United States
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Mingyi Li¹, Erik Beall¹, Mark Lowe¹
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- 3561 A Consensus clustering-based framework for brain segmentation using resting fMRI**
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- 3564 Microstructural Parcellation of the Rat and Human Cortices using Restricted Diffusion Measure**
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- 3566 Comparison of manual versus automatic delineation of low-grade gliomas based on MR brain scans**
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- 3567 Structural brain connectivity is a mixture of cliques and connectors**
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- 3568 Generation and evaluation of cortical area parcellations from functional connectivity boundary maps**
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- 3569 An EEG/MRI-dMRI Study: Structural properties of the Thalamus and its Influence on Human Alpha Waves**
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Simon Eskildsen¹, Erhard Næss-Schmidt¹, Jakob Blicher¹, Torben E. Lund¹, Anna Tietze²
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- 3573 Sulcal pits extraction: reliability and filtering parameter setting**
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- 3574 Brain lobes segmentation through spectral clustering**
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- 3583 Spinal cord atrophy quantification: comparison of segmentation methods for 3T T2-weighted MR images**
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- 3584 Segmentation of the thalamus based on the clustering algorithm and functional connectivity**
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- 3585 Transition between parcellation regions within the anterior cingulate: A meta-analytic approach**
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- 3586 Automatic cortical surface reconstruction and tissue segmentation from high-resolution T1w EPI at 7T**
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- 3587 Gray Matter Clustering Associated with Genetic Variation within the Intraparietal Sulcus**
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- 3588 Classification of the Fronto-Parietal Cortex Using High Resolution Inversion Recovery MRI**
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- 3594 Which fMRI clustering gives good brain parcellations?**
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- 3607 Simplified power and sample size calculations using prevalence & magnitude of active peaks**
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- 3632 Linking Data, Computation, and Processing through NDAR, NITRC, and the LONI Pipeline**
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- 3636 Maybrain software for powerful and intuitive graph analysis and visualisation**
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- 3637 Rapid automatic comprehensive quality assurance metrics evaluation for Neuroimaging studies**
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3644 **The effects of bilingualism on grey and white matter structure**
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- 3653 Learning-induced changes in functional connectivity differ for good vs less-good tone-learners**
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- 3654 Neuroanatomy of language learning: A morphometric study**
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- 3655 How does bilingualism shape neural networks in the youth and the elderly?**
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- 3656 Relationships between neural recruitment and language learning outcomes**
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Grace Rice¹, Matthew Lambon Ralph¹, Paul Hoffman¹
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Rebecca Jackson¹, Paul Hoffman¹, Gorana Pobric¹, Matthew Lambon Ralph¹
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Juliane Muehlhaas^{1,2,3}, Christine Watson^{4,5}, Eileen Cardillo⁵, Adam Woods⁶, Jonathan Yu⁵, Ute Habel^{1,2}, Anjan Chatterjee^{5,7}

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- 3660 Resting-state Functional Connectivity Affects Language Lateralization Associated with Handedness**

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- 3663 Lexical and semantic retrieval for concrete entities following right occipitotemporal lesions**

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- 3674 How sensory input-modality influences the responses during property verification**
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- 3675 Neural Mechanisms Underlying Syntactic and Semantic Anticipations During Sentence Comprehension**
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- 3676 Dynamics of large-scale information flow in the cortex during language processing**
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Laure Zago¹, Pierre-Yves Hervé¹, Robin Genuer², Gael Jobard¹, Fabrice Crivello¹, Laurent Petit¹, Emmanuel Mellet¹, Bernard Mazoyer¹, Nathalie Tzourio-Mazoyer¹, Marc Joliot¹
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- 3679 BAYESIAN INDEX OF BRAIN HEMISPHERIC AND REGIONAL DOMINANCE OF COGNITIVE FUNCTIONS**
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Laure Zago¹, Laurent Petit¹, Fabrice Crivello¹, Emmanuel Mellet¹, Gael Jobard¹, Marc Joliot¹, Bernard Mazoyer¹, Nathalie Tzourio-Mazoyer¹
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- 3685 Anatomical predictors of post-stroke aphasia recovery**
Stephanie Forkel¹, Michel Thiebaut de Schotten², Flavio Dell'Acqua³, Lalit Kalra⁴, Declan Murphy⁵, Steve Williams¹, Marco Catani⁵
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Chris Tailby¹, David Abbott¹, Graeme Jackson¹
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Jona Sassenhagen¹, Franziska Kretzschmar², Matthias Schlesewsky², Ina Bornkessel-Schlesewsky¹
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- 3701 The lexicality effect in the left ventral occipito-temporal cortex**
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- 3703 FMRI Investigation of Neural Correlates of Processing Sentences and Compound Words in Chinese**
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- 3704 Task and language orthography modulation of the ventral and dorsal reading networks**
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- 3705 Task modulation of LIFG activation in written nonword but not word processing**
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- 3706 Lower skilled readers' growth may be driven by compensatory bilateral connectivity and activity**
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- 3707 The neural basis of language membership in bilinguals**
Yulia Oganian¹, Markus Conrad², Katharina Spalek³, Hauke Heekeren⁴
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- 3709 Recycled brain regions for reading? Evidence for interconnectivity between face and word processing**
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- 3710 Anatomical Coupling and Individual Differences in Nonword Reading Skills**
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- 3711 Reading spatially transformed words**
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- 3713 Individual differences in audiovisual integration of speech: behavior and functional connectivity**
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- 3715 Enhanced processing of speech and music in musicians depends on a fronto-temporo-parietal network**
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- 3716 The cortical dynamics of intelligible speech in tonal language**
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- 3717 Sensitivity to language categories in superior temporal cortices: a multivariate fMRI study**
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- 3720 Conscious auditory perception related to long-range synchrony of gamma oscillations**
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- 3721 Speech perception modulates hemispheric lateralization of acoustic processing**
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- 3722 Functional connectivity during ultra-fast speech comprehension in blind listeners based on fMRI data**
Susanne Dietrich¹, Ingo Hertrich¹, Hermann Ackermann¹
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- 3724 Motor cortex contributions to comprehension of meaningful spoken words — a TMS study**
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- 3725 Oscillatory Directional Information Flow Between Auditory Cortices During Continuous Speech Coding**
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- 3726 Modulation of effective connectivity by cognitive demands in speech: An optical tomography study**
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- 3727 Matching prior expectations enhance perception of degraded speech**
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- 3728 Heschl's gyrification pattern, lateralization during speech listening, and handedness**
Marie Damien¹, Laure Zago¹, Gael Jobard¹, Guy Perchey¹, Gaëlle Leroux¹, Emmanuel Mellet¹, Marc Joliot¹, Laurent Petit², Bernard Mazoyer¹, Nathalie Tzourio-Mazoyer¹
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- 3729 Prosody processing in musicians versus non-musicians: brain and behavioral correlates**
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- 3730 The cortico-subcortical network underlying the expression of angry vocalizations**
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Bernard Mazoyer¹, Laure Zago¹, Gael Jobard¹, Fabrice Crivello¹, Marc Joliot¹, Guy Perchey¹, Emmanuel Mellet¹, Laurent Petit¹, Nathalie Tzourio-Mazoyer¹
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- 3733 Cortical and subcortical aging and speech motor control**
Pascale Tremblay¹, Mylène Bilodeau-Mercure¹, Marc Sato²
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- 3734 Paving the way for speech: Voice-training-induced plasticity in chronic aphasia and apraxia of speech**
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- 3735 The Functional Connectome of Speech Production**
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- 3736 Mapping language network pre- and intra-operatively using fMRI and electrophysiology: new method**
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- 3737 A weak language lateralization affects both verbal and spatial skills: an fMRI study in 297 subjects**
Emmanuel Mellet¹, Bernard Mazoyer¹, Laurent Petit¹, Marc Joliot¹, Gael Jobard¹, Guy Perchey¹, Fabrice Crivello¹, Zago laure¹, Nathalie Tzourio-Mazoyer¹
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- 3738 The neural substrates of continuous verbal humor production**
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3740 Individual differences in white-matter pathways in speech imitation of an unexperienced language

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Shalini Narayana¹, Asim Choudhri¹, Frederick Boop¹,
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3742 Altered Connectivity of Motor Areas During Stuttered Speech: A Meta-Analytic Connectivity Analysis

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3744 Mapping left hemisphere sites for language production with navigated TMS

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3745 Experience dependent effects of sensory perturbation on the neural singing network

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3746 Neural correlates of stuttering under external rhythm and face-to-face communication

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3748 Functional Connectivity Density of Resting-state fMRI Reveals Performance Variation of SMR-BCI

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3749 The Relationship Between Fronto-parietal Network and Motor Imagery Capacity: a Resting fMRI Study

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Rui Chen¹, Fali Li¹, Dezhong Yao¹

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- 3750 Neurofeedback of a Laterality Index from Motor Cortices during Hand Movements using Real-time fMRI**
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- 3751 Uncoupling task and feedback-processing is promising in fMRI neurofeedback of a cognitive brain area**
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- 3752 The influence of cognitive components in a fMRI neurofeedback training targeting the motor system**
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- 3753 Online EEG-neurofeedback in concurrent EEG-fMRI enhances motor imagery evoked motor cortex activity**
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- 3754 The neural network involved in brain-machine actions: an EEG-fMRI approach**
Silvia Marchesotti¹, Roberto Martuzzi¹, Maria Laura Blefari², Aaron Schurger³, Nathan Evans¹, Hannes Bleuler¹, Olaf Blanke⁴
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- 3755 A novel paradigm for fMRI-based brain-computer interfacing using selective somatosensory attention**
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- 3756 Decoding saccade intentions in humans using intracranial EEG**
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- 3758 The Role of Insular Cortex in Grasping a Disgusting Object — an MEG study**
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- 3759 Mirror visual feedback induces sensorimotor high gamma oscillations in the absence of movement**
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3760 Imitation Learning of Spatial Sequences and Rhythms: A fMRI Study in Musically Naïves and Drummers
Katrin Sakreida^{1,2}, Satomi Higuchi^{3,4,5}, Cinzia Di Dio⁶, Michael Ziessler⁷, Martine Turgeon³, Neil Roberts⁸, Giacomo Rizzolatti⁶, Stefan Vogt^{3,4}
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3761 Differential pattern of semantic and syntactic ERP signatures to the observation of action sequences
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Elisabetta Ferrari¹, Alessandro D'Ausilio¹, Laura Maffongelli¹, Eleonora Bartoli¹, Martina Campanella¹, Jeffrey Berry¹, Luciano Fadiga²
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3763 Team play of Theory of Mind and Action Observation Network during observation of pantomime in fMRI
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3764 Stronger mu suppression for consciously perceived actions
Shiri Simon¹, Michal Geron¹, Roy Mukamel²
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Michael Wright¹, Daniel Bishop¹, Robin Jackson¹, Bruce Abernethy²
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3766 S1 contains specific information on dexterous movements during movement preparation
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3767 Effects of handedness on functional resting-state connectivity within the human motor network
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3768 Phasic stabilization of the human primary motor cortex by visual and auditory stimuli
Harri Piitulainen¹, Mathieu Bourguignon¹, Eero Smeds¹, Xavier De Tiège², Veikko Jousmäki¹, Riitta Hari¹
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3769 The effect of Handedness Consistency on Bimanual Coordination
Dimitrios Kourtis¹, Lien De Saedeleer¹, Guy Vingerhoets¹
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- 3770 Partial directed coherence assessment of the corticokinematic coherence**
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- 3771 Neural Dynamics of Planning Grasping Actions**
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- 3772 LONG TERM COMPLEX MOTOR SKILLS TRAINING AND EVOLUTION IN SMALL NETWORK WORLD TOPOLOGY**
Kunal Shetty¹, Daniel Leff¹, Javier Andreu-Perez¹, Felipe Orihuela-Espina^{1,2}, Kumuthan Sriskandarajah¹, Professor Thanos Athanasiou¹, Professor Ara Darzi¹, Professor Guang-Zhong Yang¹
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- 3773 Cortical activation pattern by shoulder vibration exercise: A functional NIRS study**
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- 3774 Neurofeedback based on corticomuscular coherence**
Katherina von Carlowitz-Ghori^{1,2}, Zubeyir Bayraktaroglu^{3,1}, Gunnar Waterstraat^{1,4}, Vadim Nikulin^{1,5}, Gabriel Curio^{1,4,5}
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- 3775 Aging and the Neuronal Correlates of Tool Use and Action Planning**
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- 3776 The neural circuits underlying reaching and grasping movements: from planning to execution**
Chiara Begliomini¹, Luisa Sartori², Teresa De Sanctis¹, Vincenza Tarantino¹, Mattia Marangon³, Diego Miotto⁴, Raffaella Motta⁵, Roberto Stramare⁵, Umberto Castiello¹
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- 3777 Negative emotions increase motor force production through activation of rIFG and periaqueductal gray**
Rebekah Blakemore¹, Sebastian Rieger¹, Patrik Vuilleumier¹
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- 3778 Neural correlates of simple and complex tool use in 102 acute stroke patients**
Markus Hoeren¹, Dorothee Kümmerer², Tobias Bormann², Magnus-Sebastian Vry³, Vera Ludwig¹, Lena Beume¹, Michel Rijntjes², Christoph Kaller⁴, Cornelius Weiller²
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- 3779 Directional Tuning and Reference Frames Revealed by Noninvasive EEG in Humans**
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- 3780 Finger representations in motor and sensory cortex are shaped by natural movement statistics**
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- 3781 Acoustically induced gait perturbations reveal neural correlates of step adaptation strategies**
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- 3782 Functional correlates of neurological soft signs in healthy adults**
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- 3783 High and low γ oscillations in the sensorimotor feet area are conversely modulated by the gait cycle**
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- 3784 Human cortical sites involved with cardiovascular control during exercise: A preliminary MEG study**
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- 3785 Dissecting sub-components of the neural network for volitional hand movements — an ALE meta-analysis**
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- 3786 Handedness and ipsilateral motor activity during hand movements in 142 right- & 149 left-handers**
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- 3787 The ‘alphabet’ of human hand movements: a fMRI study on the neural correlates of postural synergies**
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- 3788 Decoding Free-Choice Movement Selection during Motor Planning**
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- 3789 Imaging Neural Controls of Head Movements in Humans**
Cecilia Prudente¹, Randall Stilla¹, Cathrin Buetefisch¹, Xiaoping Hu², Krish Sathian¹, H.A. Jinnah¹
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- 3790 Subcortical and cortical brain correlates of neurological soft signs in healthy adults**
Dusan Hirjak¹, Robert Christian Wolf¹, Katharina Maria Kubera¹, Bram Stieltjes², Philipp Thomann¹
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- 3791 Inhibition during movement preparation is sensitive to response difficulty**
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- 3792 Performing Two Things at Once: Brain Activity during Dual Tasking**
Sue Peters¹, Michael Borich², Elisabeth Dao¹, Mohammad Amanian¹, Cameron Mang¹, Lara Boyd¹
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²Emory University, Atlanta, GA

- 3793 Focal gray matter plasticity as a function of long duration head-down tilt bed rest**
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- 3794 Elucidating the role of SMA and preSMA in action control combining fMRI, EEG and DTI**
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- 3795 Sensory Prediction of an Action Consequence during Specification of Motor Output**
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VISUO-MOTOR FUNCTIONS

- 3796 Effective connectivity in cortical networks of visual motion processing and ocular-motor control**
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- 3797 Cerebral lateralization of a various driving speed difference**
Mi Hyun Choi¹, Hyung-Sik Kim¹, Jung Chul Lee¹, Sung Jun Park¹, Soon-Cheol Chung¹
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- 3798 A Topographical Organization of Action Representation in the Human Brain**
Giacomo Handjaras¹, Giulio Bernardi¹, Francesca Benuzzi², Paolo Nichelli², Pietro Pietrini³, Emiliano Ricciardi¹
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- 3799 Decoding observed grasping and pointing: an MEG study**
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- 3800 Cortical responses for saccadic adaptation measured with fMRI**
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- 3801 Imaging oculomotor subsystems in the cerebellum at 7 Tesla**
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³Image Science Institute, Utrecht, Netherlands,
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- 3802 One glance is enough — Concept acquisition of novel tools**
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- 3803 Neural representation of visual hand and target information for goal-directed reaching movements**
Alexandra Reichenbach¹, Peter Zatka-Haas¹, Joern Diedrichsen¹

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- 3804 Stimulated visual cortex modulates bilateral motor cortex during inter-hemispheric transfer**
Amro Omar¹, Vaibhav Diwadkar², Richard White², Carlo Marzi³, Paolo Brambilla⁴, Marcella Bellani⁵, Gianluca Rambaldelli⁵, Silvia Savazzi³

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- 3805 MEG correlates of truly spontaneous variability in response time and how much they account for**

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- 3806 Line bisection using tactile stimulus: an fMRI study**

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Neuroanatomy

ANATOMY AND FUNCTION

- 3807 Effects of attention and uncertainty on cerebellar activity during visual motion perception**

Oliver Baumann¹, Jason Mattingley¹
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- 3808 Different insular asymmetry patterns in individuals with typical and atypical speech dominance**

Guy Vingerhoets¹, Adam Felton², David Vazquez², Lise Van der Haegen¹, Christine Chiarello²
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- 3809 MP3 your A1! How frequent headphone-usage shapes your auditory cortex**

Robert Trampel¹, Andreas Schaefer¹, Christine Tardif¹, Miriam Waehnert¹, Marcel Weiss^{1,2}, Juliane Dinse¹, Pierre-Louis Bazin¹, Robert Turner¹

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- 3810 Gray matter volume analysis in Schizophrenia using cytoarchitectonic maps of the human frontal pole**

Sebastian Bludau¹, Veronika Müller^{2,1}, Birgit Derntl^{3,4}, Lydia Kogler³, Oliver Gruber⁵, A. Aleman⁶, Iris Sommer⁷, Alexander Rapp⁸, Renaud Jardri⁹, Hartmut Mohlberg¹, Simon Eickhoff^{2,1}, Katrin Amunts^{1,10}

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- 3811 Myelinated cortical thickness measurements for in vivo morphological study of the human motor cortex**

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- 3812 Heterogeneous structure, function and connectivity of the human subgenual anterior cingulate cortex**

Nicola Palomero-Gallagher¹, Simon Eickhoff^{1,2}, Felix Hoffstaedter^{1,2}, Axel Schleicher¹, Hartmut Mohlberg¹, Peter Fox³, Katrin Amunts^{1,4,5}, Karl Zilles^{1,5,6}

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- 3813 Hand preference & visuomotor skill correlate with structural asymmetry of fronto-parietal networks**
Henrietta Howells¹, Michel Thiebaut de Schotten^{1,2}, Flavio Dell'Acqua^{3,4}, Giuseppe Zappalà⁵, Anoushka Leslie⁶, Andrew Simmons⁷, Declan Murphy⁷, Marco Catani⁷
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- 3814 Caudate asymmetry is related to objective and self-report measures of ADHD-like attentional problems**
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- 3815 Examining the right dorsal premotor mosaic: a connectivity-based parcellation approach**
Sarah Genon¹, Veronika Müller¹, Edna-Clarisse Cieslik¹, Felix Hoffstaedter², Robert Langner¹, Peter Fox³, Simon Eickhoff¹
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- 3816 Double-Dissociation between the mechanism leading to impulsivity and inattention in ADHD**
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- 3817 Anatomical connections of the Visual Word Form Area**
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- 3818 Exploring the time course of interhemispheric inhibition between the human primary sensory cortices**
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- 3819 Comparing shape of cranium between Neanderthal and modern humans using computational neuroanatomy**
Hiroki Tanabe^{1,2}, Takanori Kochiyama^{3,4}, Hideki Amano⁵, Kunihiro Hasegawa¹, Osamu Kondo⁶, Naomichi Ogiwara⁵
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- 3820 The Superior Temporal Sulcus: A multifunctional and crossmodal hub**
Karsten Specht¹, Philip Wigglesworth¹
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- 3821 Cortical Thickness Predicts Functional hierarchy**
Konrad Wagstyl¹, Lisa Ronan¹, Sarah Beul², Paul Fletcher¹
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- 3822 Detection of Genetic Encoding Based on Intrinsic Cortical Morphology**
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- 3823 Bariatric Surgery Reverses Grey and White Matter Reductions in Morbidly Obese Subjects: a VBM study**
Jetro Tuulari¹, Henry Karlsson¹, Olli Antikainen¹, Jussi Hirvonen², Paulina Salminen³, Saunavaara Virva¹, Pirjo Nuutila⁴, Lauri Nummenmaa⁵
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- 3824 Gray and white matter density changes in middle adulthood predict changes in learning proficiency**
Rizwan Ahmed¹, Marcella Bellani², Gianluca Rambaldelli², Richard White¹, Vaibhav Diwadkar¹, Paolo Brambilla³
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- 3825 Functional correlates of fronto-parietal networks: results from 14 meta-analyses**
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- 3826 Reliable Hippocampal Subfield Segmentation on Multi-spectral Sub-millimetric MRI**
Jessie KULAGA-YOSKOVITZ¹, Boris Bernhardt¹, Andrea Bernasconi¹, Neda Bernasconi¹
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- 3827 Grey matter structural changes in short timescale can predict reaching performance improvement**
Midori Kodama¹, Shoko Kasuga², Takashi Ono³, Fumio Yamashita⁴, Hiroki Ebata³, Meigen Liu⁵, Junichi Ushiba²
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- 3828 Dp140 isoform expression in Duchenne muscular dystrophy affects brain morphology and cognition**
Nathalie Doorenweerd^{1,2,3}, Chiara Straathof¹, Eve Dumas¹, Erik Niks¹, Pietro Spitali¹, Ieke Ginjaar¹, Beatrijs Wokke¹, Debby Schrans⁴, Janneke van den Bergen¹, Erik van Zwet¹, Andrew Webb^{1,3}, Mark van Buchem^{5,2}, Jos Hendriksen^{4,6}, Jan Verschuuren¹, Hermien Kan^{1,2,3}
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- 3829 The effect of stimulus quality in comparing intact to scrambled point-light displays**
LEE SEUL SHIM¹, Salim Al-wasity¹, Lawrie McKay², Ulf Ahlstrom³, Peipei Lui¹, Catherine Pemble⁴, Frances Crabbe⁵, Frank Pollick¹
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- 3830 Brain mapping of p53 mutation in low-grade glioma: A quantitative neuroimaging analysis**
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- 3831 The Brain Catalogue: An open portal for comparative neuroanatomy research**
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- 3832 Gyrfication of the cerebral cortex of ferrets**
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- 3833 Cognitively-Based Compassion Training Yields Increase in Cortical Thickness After Eight Weeks**
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- 3834 Mapping functional dynamics onto anatomical networks: a proof of concept**
Flavio Dell'Acqua¹, Filippo Zappasodi^{2,3}, Laura Marzetti^{2,3}, Riccardo Navarra^{2,3}, Luis Lacerda¹, Massimo Caulo^{2,3}, Gian Luca Romani^{2,3}, Marco Catani¹
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- 3835 Cortical Representation of the Tail in the Spider Monkey (*Ateles geoffroyi*) as Revealed by fMRI**
Jorge Armony^{1,2}, Sarael Alcauter^{3,4}, Fernando Chico-Ponce de León⁵, Diana Platas³, Javier Villanueva³, Guillermo Islas⁶, Jairo Muñoz-Delgado³
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- 3836 Cortical thickness and surface area variations with Heschl gyri duplication in 430 healthy subjects**
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- 3837 A meta-analysis of the neuroanatomical correlates of personality**
Adina Mincic¹
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¹Weill Cornell Medical College, New York, NY, ²New York University, New York, NY, ³New York University, New York, United States
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¹Weill Cornell Medical College, New York, NY, ²New York University, New York, NY, ³New York University, New York, United States
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Wenjie Jiang¹, Yongjuan Su², Jun Yang³, Xiaoling Peng¹, Junjing Wang¹, Liqing Liu¹, Xiaofeng Chen¹, ling Weng¹, Wenhui Lun², Ruiwang Huang¹
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Sarah Beul¹, Helen Barbas², Claus Hilgetag¹
¹University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ²Boston University, Boston, MA

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- 3845 Cortical GABA-A receptor binding potential patterns display small-world characteristics**
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Daniel Shaw¹, Radek Marecek², Milan Brázdil³
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¹University of Zurich, Zurich, Switzerland
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- 3853 Altered regional topology of the brain networks in HIV-infected men naïve to HAART: A DTI study**
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- 3860 Brain Networks Analysis in the First Episode, Drug Naïve Patients with Late Life Depression**
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- 3861 RS FMRI in the awake macaque exhibit correspondence to the pattern of callosal synaptic connections**
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- 3862 Cerebellum clustering and functional connectivity during pain processing**
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- 3863 Sex differences in Rich Club connectivity are not related to cognitive performance**
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Andrew Breeden¹, Megan Norr², Evan Gordon³, Greg Siegle⁴, Chandan Vaidya⁵
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- 3872 Browsing the Connectome: 3D Functional and Structural Brain Networks in the Cloud**
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- 3873 Augmented Reality and Intrinsic Functional Connectivity Visualization Application: ARIBrain, iBrain**
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Sabine Helene Bradler¹, Nicola Palomero-Gallagher¹, Axel Schleicher¹, Karl Zilles^{1,2,3}, Hartmut Mohlberg¹, Katrin Amunts^{1,4,3}
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- 3880 Fat and thin: Effect of body fat distribution on morphological brain changes in young adults**
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- 3881 Parcellating cortical surfaces into functional units with a myelin model based on cytoarchitecture**
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- 3882 Intrinsic functional architecture of the macaque lateral frontal cortex**
Alexandros Goulas¹, Peter Stiers², R. Matthew Hutchison³, Michael Petrides⁴, Daniel Margulies¹
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David Gräßel¹, Markus Axer¹, Michael Zeineh², Nicola Palomero-Gallagher¹, Katrin Amunts^{1,3,4}, Karl Zilles^{1,5}
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- 3884 Two new cytoarchitectonic areas on the human mid-fusiform gyrus**
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- 3885 Morphometric Analysis of the Effects of LAMC3 Mutation on Cortical Structure**
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- 3886 The Cortical Column and Mesoscopic Cerebral Organization**
Philipp Haueis¹
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- 3887 Fine Grain Cortical Segmentation using Multiparametric Maps at 3T**
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- 3888 Cortical parcellation of Broca's region based on functional connectivity glyphs**
Estrid Jakobsen¹, Joachim Böttger², Stefan Geyer³, Robert Turner⁴, Michael Petrides⁵, Daniel Margulies¹
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- 3889 Non-uniform association between regional neocortical surface area and thickness**
Eero Vuoksima¹, Matthew Panizzon², Chi-Hua Chen³, Christine Fennema-Notestine², Lisa Eyler², Carol Franz², Michael Lyons⁴, Anders Dale⁵, William Kremen²
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- 3890 Retinotopic Organization of Visual Cortex Revealed by Resting State Functional Connectivity**
Matthew Glasser¹, Emma Robinson², Timothy Coalson³, Stephen Smith⁴, Mark Jenkinson⁵, David Van Essen⁶
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- 3891 Overlap between language processing areas and sensory-motor maps**
Mariam Sood¹, Martin Sereno²
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- 3892 Visual deprivation reduces cortical anatomical coupling between remote dorsal stream structures**
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- 3893 3D cortical profiles in histological samples**
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¹Stanford University, Department of Radiology, Stanford, United States, ²Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 3894 Segmentation of the Planum Temporale by Connectivity-Based Classification in Hearing and Deaf Brains**
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- 3895 Alterations of Cortical Thickness in Adolescents with Familial History of Substance Use Disorder**
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SUBCORTICAL STRUCTURES

- 3896 Amount of Meditation Practice Predicts Increase in Hippocampal Volume Over Eight Weeks**
Gaelle Desbordes¹, Omar Singleton¹, Lobsang Tenzin Negi², Thaddeus Pace³, B. Alan Wallace⁴, Charles Raison³, Eric Schwartz⁵
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- 3897 Quantifying Inter-Individual Anatomical Variability in the Subcortex using 7T Structural MRI**
Max Keuken^{1,2}, Pierre-Louis Bazin², Lindsey Crown¹, Jan Hootsmans¹, Alexander Laufer¹, Christa Muller-Axt¹, Rebecca Sier¹, Illy van der Putten¹, Andreas Schäfer², Robert Turner², Birte Forstmann^{1,2}
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- 3898 Cytoarchitectonic mapping of cerebellar nuclei in stereotaxic space**
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- 3899 Cytoarchitecture, probability maps and functional differentiation of the human dorsal striatum**
Anja Ludwig-Zahl¹, Felix Hoffstaedter^{2,3}, Hartmut Mohlberg², Simon Eickhoff^{3,2}, Karl Zilles^{2,4,5}, Katrin Amunts^{2,6,5}
¹C. & O. Vogt Institute for Brain Research, Heinrich-Heine University Düsseldorf, Duesseldorf, Germany, ²Institute of Neurosciences and Medicine (INM), Research Centre Jülich, Juelich, Germany, ³Institute of Clinical Neuroscience and Medical Psychology, Heinrich Heine University, Duesseldorf, Germany, ⁴Dept. of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, Aachen, Germany, ⁵JARA-BRAIN, Jülich-Aachen Research Alliance, Juelich, Germany, ⁶C. & O. Vogt Institute for Brain Research, Heinrich-Heine University Duesseldorf, Duesseldorf, Germany
- 3900 Cycle-Related Hippocampal Variation in Humans**
Nina Lisofsky¹, Johan Mårtensson¹, Jürgen Gallinat², Ulman Lindenberger¹, Simone Kühn¹
¹Max Planck Institute for Human Development, Berlin, Germany, ²Dept. of Psychiatry and Psychotherapy, CCM, Charité — Universitätsmedizin Berlin, Berlin, Germany
- 3901 Subcortical Interactions of Basal Ganglia and Cerebellum — Thalamus**
Andreas Hintzen¹, Pelzer Esther², D. Yves von Cramon², Marc Tittgemeyer¹
¹Max Planck Institute for Neurological Research, Cologne, Germany, ²Max-Planck Institute for Neurological Research, Cologne, Germany
- 3902 Dorsomedial striatum involvement in regulating conflict between current and presumed outcomes**
Anna Mestres-Misse¹, Pierre-Louis Bazin², Robert Trampel², Robert Turner², Sonja Kotz^{1,2}
¹The University of Manchester, Manchester, United Kingdom, ²Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 3903 Exploring Localization of Human Substantia Nigra by Averaging Directional Anisotropy Maps**
Timothy Ellmore¹, Sara Murphy¹, Katarina Cruz¹, Richard Castriotta², Mya Schiess²
¹The City College of New York, New York, NY, ²The University of Texas Medical School at Houston, Houston, TX
- 3904 Functional parcellation of the human thalamus and histological concordance**
Vinod Kumar^{1,2}, Christian Beckmann^{3,4}, Erik van Oort^{3,4}, Wolfgang Grodd¹
¹Dep of Psychiatry, Psychotherapy and Psychosomatics, University Clinics, RWTH Aachen, Aachen, Germany, ²Graduate School of Neural & Behavioral Sciences, International Max Planck Research School, Tübingen, Germany, ³Donders Institute for Brain, Cognition and Behavior Radboud University Nijmegen, Nijmegen, Netherlands, ⁴MIRA Institute for Biomedical, Technology and Technical Medicine, University of Twente, Twente, Netherlands
- 3905 Functional connectivity of the human hypothalamus using meta-analytic connectivity modeling**
Katherine Bottenhorn¹, Jennifer Robinson²
¹Auburn University, Auburn, AL, ²Auburn University, Auburn, United States

3906 Thalamic structural connectivity reveals the functional architecture of thalamocortical systems*Jonathan O'Muircheartaigh¹, Simon Keller², Gareth Barker¹, Mark Richardson³*¹King's College London, London, United Kingdom,²University of Liverpool, Liverpool, United Kingdom,³King's College London, Institute of Psychiatry, London, United Kingdom**3907 Mapping functional connectivity patterns of cholinergic basal forebrain nuclei in the human brain***Michel Grothe¹, Helmut Heinsen², Stefan Teipel³*¹German Center for Neurodegenerative Diseases (DZNE) — Rostock, Rostock, Germany, ²Laboratory of Morphological Brain Research, Department of Psychiatry, University of Würzburg, Würzburg, Germany, ³University of Rostock and DZNE, Rostock, Germany**3908 Volume Reductions in Visual and Non-Visual Thalamic Nuclei in Congenital Blindness***Luca Cecchetti^{1,2}, Emiliano Ricciardi¹,**Ludwig Barbaro^{1,2}, Ron Kupers³, Maurice Ptito^{4,3}, Pietro Pietrini^{1,2}*¹Laboratory of Clinical Biochemistry and Molecular Biology, University of Pisa, Pisa, Italy, ²Clinical Psychology Branch, Pisa University Hospital, Pisa, Italy, ³BRAINlab, Department of Neuroscience & Pharmacology, Panum Institute, University of Copenhagen, Copenhagen, Denmark, ⁴Harland Sanders Chair, School of Optometry, University of Montreal, Montreal, Canada**3909 Subcortical Atrophy in Adolescents with Familial History of Substance Use Disorder***Zhishun Wang¹, Jianping Qiao², Lupo Geronazzo¹, Lawrence Amse³, Cristiane Duarte³, George Musa³, Xiaofu He⁴, Guihu Zhao⁵, Jun Long⁵, Thao Doan⁴, Joy Hirsch⁶, Christina W. Hoven⁴*¹Columbia University, New York, United States,²Shandong Normal University, Jinan, Shandong,³Department of Psychiatry, Columbia University and The New York State Psychiatric Institute, New York, NY, ⁴Department of Psychiatry, Columbia University and The New York State Psychiatric Institute, New York, United States, ⁵School of Information Science and Engineering, Central South University, Changsha, China, ⁶Departments of Psychiatry and Neurobiology, Yale School of Medicine, New Haven, United States**WHITE MATTER NANTOMY, FIBER PATHWAYS AND CONNECTIVITY****3910 Neural connectivity of the lateral geniculate body in human brain: diffusion tensor imaging study***Hyeok Gyu Kwon¹, Sung Ho Jang¹*¹Department of Physical Medicine and Rehabilitation, College of Medicine, Yeungnam University, Daegu, Korea, Republic of**3911 Connectivity directionally-encoded color map: a streamline-based color mapping***Gabriel Girard^{1,2}, Kevin Whittingstall¹,**Rachid Deriche², Maxime Descoteaux¹*¹Université de Sherbrooke, Sherbrooke, Qc, Canada,²INRIA, Sophia-Antipolis, France**3912 Depicting the connections of the BNST in vivo — a diffusion tensor imaging study***Oliver Krüger¹, Thomas Shiozawa², Benjamin Kreifelts³, Klaus Scheffler^{1,4}, Thomas Ethofer^{1,3}*¹Department of Biomedical Magnetic Resonance, Eberhard-Karls-University of Tübingen, Tübingen, Germany, ²Department of Anatomy, Eberhard-Karls-University of Tübingen, Tübingen, Germany, ³Department of Psychiatry and Psychotherapy, Eberhard-Karls-University of Tübingen, Tübingen, Germany, ⁴Max-Planck-Institute for Biological Cybernetics, Tübingen, Germany**3913 Callosal fibre target sites in human visual cortex: a diffusion and polarized light imaging study***Svenja Caspers¹, Markus Axer¹, Christiane Jockwitz¹,**Kerstin Jütten¹, Stefan Lenzen¹, Julia Reckfort¹,**David Graessel¹, Katrin Amunts^{1,2}, Karl Zilles^{1,3,4}*¹Institute of Neuroscience and Medicine, INM-1, Research Centre Juelich, Juelich, Germany, ²C. and O. Vogt Institute for Brain Research, Heinrich-Heine-University Düsseldorf, Düsseldorf, Germany, ³Department of Psychiatry, Psychotherapy, and Psychosomatics, RWTH Aachen University, Aachen, Germany, ⁴JARA-BRAIN, Jülich-Aachen Research Alliance, Jülich, Germany**3914 Mapping the Perforant Pathway with Polarized Light Microscopy***Michael Zeineh¹, Nicola Palomero-Gallagher²,**Markus Axer³, David Graessel³, Katrin Amunts⁴,**Karl Zilles⁵*¹Stanford University, Stanford, United States,²Institute of Neurosciences and Medicine (INM-1), Research Centre Jülich, Jülich, Germany, ³Research Centre Juelich, Juelich, Germany, ⁴Research Centre Juelich (INM-1), Juelich; Aachen, Germany, ⁵Research Center Jülich, Jülich, Germany

- 3915 Two-year change in diffusion properties of cerebral white matter in healthy adults**
Andrew Bender¹, Naftali Raz¹
¹Wayne State University, Detroit, United States
- 3916 Comparing Diffusion Tractography with Tracer-based Connectivity in the Macaque**
Chad Donahue¹, Matthew Glasser², Stamatios Sotiropoulos³, Tim Behrens³, Saad Jbabdi⁴, Henry Kennedy⁵, David Van Essen⁶
¹Washington University in Saint Louis, Saint Louis, United States, ²Washington University in St. Louis, St. Louis, MO, ³University of Oxford, Oxford, United Kingdom, ⁴FMRIB Centre, Oxford, United Kingdom, ⁵Stem cell and Brain Research Institute (SBRi), Inserm U846, Bron, France, ⁶Washington University, N/A
- 3917 Mismatch between cortical and callosal myelination assessed with T1/T2-weighted MRI**
Stefano Sandrone¹, Flavio Dell'Acqua¹, Declan Murphy¹, Marco Catani¹, Michel Thiebaut de Schotten¹
¹Institute of Psychiatry — King's College London, London, United Kingdom
- 3918 Topography of transcallosal fibers in the reach and grasp system**
Julia Camilleri¹, Svenja Caspers², Veronika Müller¹, Saad Jbabdi³, Claudia Rottschy⁴, Simon Eickhoff¹
¹Institute of Clinical Neuroscience and Medical Psychology, Heinrich Heine University, Duesseldorf, Germany, ²Institute of Neuroscience and Medicine, INM-1, Research Center Juelich, Juelich, Germany, ³FMRIB Centre, Oxford, United Kingdom, ⁴Department of Psychiatry, Psychotherapy, and Psychosomatics, RWTH Aachen, University, Aachen, Germany
- 3919 Advanced Image Processing for 3D-PLI: Revealing Fiber Architecture in Cortical Areas**
Hendrik Wiese¹, Uwe Pietrzyk², Katrin Amunts³, Markus Axer⁴
¹Research Center Juelich (INM-1), Juelich, Germany, ²Research Centre Juelich (INM-4), Juelich, Germany, ³Research Centre Juelich (INM-1), Juelich; Aachen, Germany, ⁴Research Centre Juelich (INM-1), Juelich, Germany
- 3920 In-vivo human cerebellar corticonuclear connectivity at 7T**
Christopher Steele¹, Alfred Anwander¹, Pierre-Louis Bazin¹, Robert Trampel¹, Andreas Schaefer¹, Robert Turner¹, Narender Ramnani², Arno Villringer¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Royal Holloway, University of London, Egham, United Kingdom
- 3921 Parcellation of the Corpus Callosum by Magnetisation Transfer Imaging**
Martina Callaghan¹, Siawoosh Mohammadi¹, Nikolaus Weiskopf¹
¹Wellcome Trust Centre for Neuroimaging, UCL Institute of Neurology, University College London, London, United Kingdom
- 3922 The cortico-cortical structural connectivity of the human insula**
Jimmy Ghaziri¹, Alan Tucholka², Jean-Christophe Houde³, Gabriel Girard⁴, Maxime Descoteaux⁴, Pierre Rainville⁵, Dang Khoa Nguyen⁶
¹Department of Neuroscience, Université de Montréal, Montréal, Canada, ²Centre de Recherche du Centre Hospitalier Universitaire de Montréal (CRCHUM), Montréal, Canada, ³Université de Sherbrooke, Sherbrooke, Canada, ⁴Université de Sherbrooke, Sherbrooke, Canada, ⁵Centre de Recherche de l'Institut Universitaire de Gériatrie de Montréal, Montréal, Canada, ⁶Department of Neurology, CHUM – Notre-Dame Hospital, Montréal, Canada
- 3923 The test-retest reliability of white matter connectivity: a multiplexed diffusion MRI study**
Fei Duan^{1,2,3}, Tengda Zhao^{1,2,3}, Yong He^{1,2,3}, Ni Shu^{1,2,3}
¹State Key Laboratory of Cognitive Neuroscience and Learning, Beijing, China 100875, ²IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing, China 100875, ³Center for Collaboration and Innovation in Brain and Learning Sciences, Beijing Normal University, Beijing, China 100875
- 3924 Crossing the scales with 3D-PLI: from classical myeloarchitecture to diffusion tensor imaging**
Markus Axer¹, David Graessel¹, Svenja Caspers¹, Huub Hovens², Stefan Koehnen¹, Philipp Schloemer¹, Giuseppe Tabbi¹, Julia Reckfort¹, Hendrik Wiese¹, Karl Zilles^{1,3}, Katrin Amunts^{1,4}
¹Research Centre Juelich (INM-1), Juelich, Germany, ²University of Technology Eindhoven, Eindhoven, Netherlands, ³RWTH Aachen (3Department of Psychiatry, Psychotherapy, and Psychosomatics), Aachen, Germany, ⁴Heinrich Heine University (C. and O. Vogt Institute for Brain Research), Duesseldorf, Germany

- 3925 Validation of diffusion weighted tractography in the dentaterubrothalamic tract**
Jeroen Mollink^{1,2}, Cees Slump², Kirsten van Baarsen³, Sean Foxley⁴, Karla Miller⁴, David Norris^{5,2,6}, Michiel Kleinnijenhuis^{7,5,8}, Anne-Marie van Cappellen van Walsum^{9,5,2}
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- 3926 Structure of weak ties in the macaque cortico-cortical network**
Alexandros Goulas¹, Daniel Margulies¹
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
- 3927 ACID — a post-processing toolbox for advanced diffusion MRI**
Siawoosh Mohammadi¹, Lars Ruthotto², Karsten Tabelow³, Thorsten Feiweier⁴, Joerg Polzehl⁵, Nikolaus Weiskopf⁶
¹Wellcome Centre for Neuroimaging, UCL Institute of Neurology, London, United Kingdom, ²Department of Computer Science and Institute of Applied Mathematics, University of British Columbia, Vancouver, Canada, ³WIAS, Berlin, Germany, ⁴Siemens AG, Healthcare section, Erlangen, Germany, ⁵WIAS Berlin, Berlin, Germany, ⁶Wellcome Trust Centre for Neuroimaging, UCL Institute of Neurology, London, United Kingdom
- 3928 Effect of LAMC3 Mutation on White Matter Architecture: a Diffusion Tensor Imaging (DTI) study**
Pinar Boyaci¹, Irtiza Gilani¹, Buse Urgan¹, Fatma Ustun¹, Kader Karli Oguz², Huseyin Boyaci³, Yasemin Topac¹, Katja Doerschner³
¹National Magnetic Resonance Research Center, Bilkent University, Ankara, Turkey, ²Department of Radiology, Hacettepe University, Ankara, Turkey, ³Department of Psychology, and National Magnetic Resonance Research Center, Bilkent University, Ankara, Turkey
- 3929 White matter microstructure in transsexuals and controls investigated by diffusion tensor imaging**
Georg Kranz¹, Andreas Hahn¹, Martin Küblböck², Ronald Sladky², Sebastian Ganger¹, Rene Seiger¹, Siegfried Kasper¹, Christian Windischberger², Rupert Lanzenberger¹
¹Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria, ²Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria
- 3930 Stem-based tractography to study the anatomical connectivity of human brain white matter pathways**
Janice Hau¹, Silvio Sarubbo², Guy Perchey³, Fabrice Crivello³, Marc Joliot³, Laure Zago³, Gael Jobard³, Emmanuel Mellet³, Bernard Mazoyer³, Nathalie Tzourio-Mazoyer³, Laurent Petit³
¹GIN UMR5296 CNRS CEA Université Bordeaux, Bordeaux, France, ²Division of Neurosurgery, Santa Chiara Hospital — APSS, Trento, Italy, ³GIN UMR5296 CNRS CEA Université Bordeaux, Bordeaux, France
- 3931 Conduct disorder, callous-unemotional traits and the dorsal default-mode network**
Arjun Sethi¹, Quinton Deeley², Sagari Sarkar², Marco Catani², Flavio Dell'Acqua², Declan Murphy², Michael Craig²
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- 3932 Frontal Lobe Intraconnectivity — Short Range Tract Characteristics in Old Age**
Simon Cox¹, Benjamin Aribisala^{1,2}, Karen Ferguson¹, Sarah MacPherson¹, Maria Valdez Hernandez¹, Natalie Royle¹, Alasdair MacLullich¹, John Starr¹, Ian Deary¹, Joanna Wardlaw¹, Mark Bastin¹
¹University of Edinburgh, Edinburgh, United Kingdom, ²Lagos State University, Lagos, Nigeria
- 3933 Structural Connectivity of the Neural Network Underlying Planning Ability**
Lena Koestering^{1,2,3}, Kai Nitschke^{1,2,3,4}, F. Konrad Schumacher^{1,2,4}, Marco Reiser⁵, Irina Mader^{6,2}, Karl Egger^{6,2}, Jürgen Hennig^{5,2,4}, Cornelius Weiller^{1,2,4}, Christoph Kaller^{7,2,4}
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- 3934 Visual Pathway Reconstruction with FOD-based Diffusion Image Analysis**
Alexandra Kammen¹, Meng Law², Arthur Toga³, Yonggang Shi³
¹Keck School of Medicine of USC, Los Angeles, CA, ²Dept. of Radiology, Keck School of Medicine of USC, Los Angeles, CA, ³Institute for Neuroimaging & Informatics, Keck School of Medicine of USC, Los Angeles, CA
- 3935 Abnormalities of the uncinate fasciculus correlate with behavioural symptoms in Primary Progressive**
Lucio D'Anna¹, Marsel Mesulam², Michel Thiebaut de Schotten³, Estrid Jakobsen⁴, Christina Wieneke⁵, Flavio Dell'Acqua⁶, Emily Rogalski⁵, Marco Catani⁷
¹Natbrainlab, Department of Forensic and Neurodevelopmental Sciences, Institute of Psychiatry, King's, London, United Kingdom, ²Cognitive Neurology and Alzheimer's Disease Center, Chicago, IL, ³Institute of Psychiatry, London, United Kingdom, ⁴Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ⁵Cognitive Neurology and Alzheimer's Disease Center, Chicago, IL, ⁶King's College London — Institute of Psychiatry, London, United Kingdom, ⁷Institute of Psychiatry — King's College London, London, United Kingdom
- 3936 White matter lesions are related to atrophy in subcortical areas and cognition in Multiple Sclerosis**
Amy Kuceyeski¹, Wendy Vargas¹, Elizabeth Monohan¹, Christopher Blackwell¹, Ashish Raj¹, Kyoko Fujimoto¹, Susan Gauthier¹
¹Weill Cornell Medical College, New York, NY
- 3937 STUTTERING AS FIRST PRESENTATION OF A GLIOBLASTOMA: CASE REPORT AND MR DIFFUSION TRACTOGRAPHY**
Lucio D'Anna¹, LAURA CECOTTI², LUCIO LAZZARINO DE LORENZO³, SILVIA ROS³, EMANUELE SAGGESE³, Marco Catani⁴
¹Natbrainlab, Department of Forensic and Neurodevelopmental Sciences, Institute of Psychiatry, King's, London, United Kingdom, ²Neurology Department, Gorizia Hospital, GORIZIA, GORIZIA, ³Neurology Department, Gorizia Hospital, GORIZIA, Italy, ⁴Institute of Psychiatry — King's College London, London, United Kingdom
- 3938 White Matter Microstructure Asymmetry in Left-handers: Diffusion Tensor Imaging Study**
Mikolaj Pawlak¹, Lukasz Przybylski², Szymon Bidula³, Gregory Krolczak⁴
¹Poznan University of Medical Sciences, Poznan, Poland, ²Institute of Psychology, Adam Mickiewicz University, Poznan, Poland, ³Action and Cognition Laboratory, Institute of Psychology, Adam Mickiewicz University Poznan, Poland, ⁴Adam Mickiewicz University, Poznań, Poland
- 3939 Anatomical connectivity of the inferior fronto-occipital fasciculus using stem-based tractography**
Janice Hau¹, Guy Perchey², Silvio Sarubbo³, Marc Joliet², Fabrice Crivello², Gael Jobard², Laure Zago², Emmanuel Mellet², Bernard Mazoyer², Nathalie Tzourio-Mazoyer², Laurent Petit²
¹GIN UMR5296 CNRS CEA Université Bordeaux, Bordeaux, France, ²GIN UMR5296 CNRS CEA Université Bordeaux, Bordeaux, France, ³Division of Neurosurgery, Santa Chiara Hospital — APSS, Trento, Italy
- 3940 Imaging of intracranial trigeminal fibres in multiple sclerosis**
David Qixiang Chen¹, Danielle DeSouza^{1,2}, Mojgan Hodaie^{3,1}
¹Institute of Medical Science, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada, ²Division of Brain, Imaging and Behaviour Systems Neuroscience, Toronto Western Research Institute, University Health Network, Toronto, Ontario, Canada, ³Division of Neurosurgery and Institute of Medical Science, University of Toronto, Toronto, Ontario, Canada
- 3941 Decreased White Matter Microstructural Integrity in Obese Adults**
Jo Ann Antenor-Dorsey¹, Sarah Eisenstein¹, Danuta Gredysa¹, Jerrel Rutlin¹, Heather Lugar¹, Jonathan Koller¹, Emily Bihun¹, Samantha Ranck¹, Ana Maria Arbelaes¹, Joshua Shimony¹, Tamara Hershey¹
¹Washington University School of Medicine, St. Louis, MO
- 3942 Structural interhemispheric interactions in primary somatosensory cortices in upper-limb amputees**
Jamila Andoh¹, Jörg Trojan², Robin Bekrater-Bodmann¹, Martin Diers¹, Sandra Kamping¹, Mariela Rance¹, Michaela Ruttorf³, Herta Flor¹
¹Central Institute of Mental Health, Mannheim, Germany, ²Department of Psychology, University of Koblenz-Landau, Landau, Germany, ³Computer Assisted Clinical Medicine, Heidelberg University, Mannheim, Germany
- 3943 A Virtual Homologue for Circadian Circuits in Humans with Diffusion Tensor Imaging Tractography**
Kristin Koller¹, Paul Mullins¹, Robert Rafal¹
¹Bangor University, Wales, Bangor, United Kingdom

- 3944 Global white matter geometry changes in autism spectrum disorder**
Peter Savadjiev¹, Yogesh Rath¹, Sylvain Bouix¹, Alex Smith², Robert Schultz³, Ragini Verma², Carl-Fredrik Westin⁴
¹Brigham and Women's Hospital, Harvard Medical School, Boston, MA, ²UPenn, Phila, United States, ³Center for Autism Research, Children's Hospital of Philadelphia, Philadelphia, United States, ⁴Laboratory of Mathematics in Imaging, Brigham and Women's Hospital, Harvard Medical School, Boston, MA
- 3945 Global and local fractional anisotropy is inversely related to body mass index**
Paul Geha¹, Xue Sun², Marga Veldhuizen³, Dana Small⁴
¹Yale University, New Haven, United States, ²Yale University, New Haven, CT, ³The John B. Pierce Laboratory, New Haven, CT, ⁴Yale University & The John B. Pierce Laboratory, New Haven, CT
- 3946 Widespread white matter associations with optic disc parameters**
Neda Jahanshad¹, Katie McMahon², Greig Zubicaray³, Nicholas Martin⁴, Margaret Wright⁴, Alex Hewitt⁵, David Mackey⁶, Paul Thompson⁶
¹USC, Los Angeles, United States, ²Centre for Advanced Imaging, The University of Queensland, Brisbane, QLD, ³School of Psychology, The University of Queensland, Brisbane, Australia, ⁴Queensland Institute of Medical Research, Herston, Queensland, ⁵Centre for Eye Research Australia, University of Melbourne, Melbourne, Australia, ⁶Keck School of Medicine of USC, Los Angeles, CA
- 3947 Resting-State Functional Connectivity Predicts Slower Decline of Structural Connectivity in Normal**
Pawel Skudlarski¹, Beata Skudlarska², Leslie Wolfson³, Michael Stevens⁴, Godfrey Pearlson⁴
¹Hartford Hospital/IOL, Hartford, United States, ²dGeriatric and Palliative Service Line, Bridgeport Hospital, Bridgeport, CT, ³cDepartment of Neurology, University of Connecticut Health Center, Farmington, CT, ⁴Department of Psychiatry, Yale University School of Medicine, Olin Research Center, Hartford, CT

Perception and Attention

ATTENTION: AUDITORY/TACTILE/MOTOR

- 3948 The Functional Neuroanatomy of Tonic Alertness**
Clio COSTE^{1,2}, Andreas KLEINSCHMIDT¹
¹Department of Clinical Neurosciences, University Hospital (HUG) and University of Geneva, Geneva, Switzerland, ²Inserm U992 Cognitive Neuroimaging Unit, Gif/Yvette, France
- 3949 Attention modulates prediction, not adaptation, in repetition suppression**
Yi-Fang Hsu¹, Jarmo Hämäläinen², Florian Waszak¹
¹Laboratoire Psychologie de la Perception (UMR 8158), Paris, France, ²Department of Psychology, University of Jyväskylä, Jyväskylä, Finland
- 3950 EEG source-level oscillations reflect tactile spatial coordinates in sighted and in blind humans**
Jonathan Schubert¹, Verena Buchholz², Julia Föcker³, Andreas Engel², Brigitte Röder¹, Tobias Heed¹
¹Biological Psychology and Neuropsychology, University of Hamburg, Germany, Hamburg, Germany, ²Department of Neurophysiology and Pathophysiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ³Department of Psychology and Educational Sciences, University of Geneva, Geneva, Switzerland
- 3951 Attention modulates cerebral responses to conscious and unconscious tactile events**
Norman Forschack^{1,2}, Till Nierhaus^{1,3,4}, Matthias Müller², Arno Villringer^{1,3,4}
¹Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²Department of Psychology, University of Leipzig, Leipzig, Germany, ³Berlin Neuroimaging Center and Dept. Neurology, Charité, Berlin, Germany, ⁴Mind-Brain Institute and Berlin School of Mind and Brain, Charité Universitätsmedizin and HU Berlin, Berlin, Germany
- 3952 Self-supervised app-based auditory attention training induces neural plasticity: An fMRI study**
Josef Bless¹, Kristiina Kompus¹, Magne Gudmundsen¹, Kenneth Hugdahl^{1,2}, Rene Westerhausen¹
¹University of Bergen, Bergen, Norway, ²Haukeland University Hospital, Bergen, Norway
- 3953 Active sound generation modulates activity in auditory cortex regardless of tactile feedback**
Daniel Reznik¹, Ori Ossmy¹, Roy Mukamel¹
¹Tel Aviv University, Tel Aviv, Israel

3954 Somatosensory steady state signal negatively correlates with BOLD activity in primary somatosensory
Dominique Goltz¹, Christopher Gundlach¹, Till Nierhaus², Arno Villringer³, Matthias Müller⁴
¹Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ²MPI for Human Cognitive and Brain Sciences Leipzig, Leipzig, Germany, ³Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, ⁴University of Leipzig, Leipzig, Germany

3955 Effect of attention on early auditory evoked gamma band response in healthy subjects — an MEG study
Nenad Polomac¹, Gregor Leicht¹, Guido Nolte², Christina Andreou¹, Till Schneider², Saskia Steinmann¹, Andreas Engel², Christoph Mulert¹
¹Psychiatry Neuroimaging Branch, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, ²Dept. of Neurophysiology and Pathophysiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

3956 Selective modulation of auditory cortical alpha activity in an audiovisual spatial attention task
Julia Frey¹, Nelly Mainy², Nadia Müller¹, Jean-Philippe Lachaux², Olivier Bertrand², Nathan Weisz¹
¹Università degli Studi di Trento, Mattarello, Italy, ²Brain Dynamics and Cognition Team, Lyon Neuroscience Research Center, Lyon-Bron, France

3957 Feature-specific and task-dependent processing of pitch and location in human auditory cortex
Suvi Talja¹, Noora Ovaska¹, Teemu Rinne^{1,2}
¹Institute of Behavioural Sciences, University of Helsinki, Helsinki, Finland, ²Advanced Magnetic Imaging Centre, Aalto University School of Science, Espoo, Finland

3958 Tonal organization of the auditory cortex in patients with chronic tinnitus
Tomasz Wolak¹, Iwona Niedzialek², Monika Lewandowska³, Rafal Milner³, Malgorzata Ganc³, Katarzyna Cieśla², Mateusz Rusiniak⁴, Agnieszka Pluta², Henryk Skarżyński³
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3959 The Influence of Feature-Based Task Effects on Binaural Cue Representation in Human Auditory Cortex
Nathan Higgins¹, Teemu Rinne², G. Christopher Stecker¹
¹Vanderbilt University, Nashville, TN, USA, ²University of Helsinki, Helsinki, Finland

ATTENTION: VISUAL

3960 fMRI brain networks related to visual alpha and gamma EEG power modulations
Rene Scheeringa¹, Tim van Timmeren¹, Robert Oostenveld¹, David Norris¹, Ole Jensen¹
¹Radboud University Nijmegen, Donders Institute for Brain, Cognition and Behaviour, Nijmegen, Netherlands

3961 Attentional control in complex environments: Spatial orienting in Neglect patients and controls
 Davide Nardo¹, Francesca Rotondaro^{2,3}, Fabrizio Doricchi^{2,3}, Stefano Paolucci⁴, Emiliano Macaluso¹
¹Neuroimaging Laboratory, Santa Lucia Foundation, Rome, Italy, ²Neuropsychology Research Center, Santa Lucia Foundation, Rome, Italy, ³Department of Psychology, "Sapienza" University, Rome, Italy, ⁴Neurorehabilitation Ward, Santa Lucia Foundation, Rome, Italy

3962 Attentional patterns during the view of environments with low vs. high restorative potential
Fernando Barrios Alvarez¹, Leopoldo Gonzales Santos¹, Erick Pasaye¹, Joel Martínez-Soto²
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3963 An EEG study on the early differential effects of foveal versus peripheral attention
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3964 Functional connectivity of a salience network during an expectancy task
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- 3965 Spontaneous Neuronal Activity Predicts Intersubject Variations in Executive Control of Attention**
Junhai Xu^{1,2,3}, Geraint Rees^{2,3}, Xuntao Yin¹, Chen Song², Yan Han⁴, Haitao Ge¹, Zengchang Pang⁵, Wenjian Xu⁴, Yuchun Tang¹, Karl Friston³, Shuwei Liu¹
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- 3966 Attentional Inhibition and Contingent Attentional Capture**
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- 3967 Association between locus coeruleus activation and pupil size: A combined fMRI / eye-tracking study**
Carina Sauer¹, Horea-Ioan Ioanăș¹, Gabriela Stöbel¹, Martin Fungisai Gerchen¹, Daniela Mier¹, Peter Kirsch¹
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- 3968 Faces and houses perceived simultaneously in bistable images: fMRI evidence**
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- 3969 Human Pulvinar Functional Organization and Connectivity**
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- 3970 Attention locally modulates the discriminability of high-level, task-relevant representations**
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- 3971 Cerebral asymmetry of human visual processing related to visuospatial attentional bias**
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- 3972 Visual Hierarchy revealed through directed influence asymmetries at distinct frequency bands**
Julien Vezoli¹, Andre Bastos¹, Conrado Bosman², Jan-Mathijs Schoffelen³, Robert Oostenveld⁴, Jarrod Dowdall¹, Peter De Weerd², Henry Kennedy⁵, Pascal Fries¹
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- 3973 Reward captures attention via insula**
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- 3974 CHRNA4 Genotype Modulates Neural Responsiveness to Nicotine in a Visuospatial Attention Task**
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- 3975 Neural correlates associated with different neural mechanisms of multiple object tracking**
Christian Merkel¹, Hans-Jochen Heinze^{1,2}, Jens-Max Hopf^{1,2}, Mircea Ariel Schoenfeld^{1,2,3}
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- 3976 Attachment Style on Attention: Electrophysiological Evidence**
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- 3977 Neural basis of controlled and automatic visual search**
Elisenda Bueichekú¹, Alfonso Barrós-Loscertales¹, César Ávila¹
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- 3978 Coordinated attraction of spatial response selectivity by spatial attention throughout visual cortex**
Barrie Klein¹, Ben Harvey¹, Serge O. Dumoulin¹
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- 3979 Distinct neuronal effects of perspective and hand grip on paired-object affordance: an fMRI study**
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- 3980 Resting State Functional Connectivity predicts performance on visual search tasks**
Elisenda Bueichekú¹, Noelia Ventura-Campos¹, Alfonso Barrós-Loscertales¹, César Ávila¹
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- 3981 Event-related desynchronization in response to surface lightness change**
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- 3982 Investigating visuospatial functions with fMRI — Goals and Limitations**
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- 3983 Age-related differences in neuronal novelty representation during a visual oddball task**
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- 3984 Sex hormonal modulation of the fronto-parietal attention network**
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- 3985 Expectations of different stimulus types engage category-specific brain areas**
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- 3986 Investigating the neural correlates of expectation with MEG**
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- 3987 Modulatory effects of trait anxiety on neural response to the Attentional Network Test**
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- 3988 Assessing attentional networks in survivors of childhood acute lymphoblastic leukemia using fMRI**
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- 3989 Multifocal attentional selection alters early cortical processing as a function of visual hemifield**
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- 3990 Distractor Processing with Paradoxical Emotion Effects in Pulvinar and Lateral Geniculate Nucleus**
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- 3991 Effects of gastric distention, nutrient content and sensory stimulation on brain activation**
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- 3992 Tasting 'energy' differentially affects brain activation during hunger and satiety**
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- 3993 Sniffing around intact olfactory networks in patients without olfactory function**
Kathrin Kolindorfer¹, Florian Fischmeister², Ksenia Kowalczyk¹, Elisabeth Hoche¹, Jacqueline Krajnik¹, Christian Mueller³, Siegfried Trattnig², Veronika Schöpf¹
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- 3994 Words Echoed: Brain processing of odor in smokers under nicotine suggestion as revealed by fMRI**
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- 3995 Modulations of the Default Mode Network During Active and Passive Olfactory Processing**
Prasanna Karunanayaka¹, Megha Vasavada¹, Robert McHugh¹, Michael Tobia¹, Jianli Wang¹, Paul Eslinger¹, Qing Yang¹
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CONSCIOUSNESS AND AWARENESS

- 3996 Neural correlates and predictive value of auditory discrimination in early coma and hypothermia**
Athina Tzovara^{1,2}, Andrea Rossetti³, Elsa Juan^{1,2,3}, Marina Pagliaro^{1,2}, Mauro Oddo⁴, Marzia De Lucia^{1,2}
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- 3997 Disrupted topological organization of the networks in patients with disorders of consciousness**
Ling Weng¹, Qiuyou Xie², Liqing Liu¹, Feng Zhou², Xiaojun Huang¹, Xiaofeng Chen¹, Qin Xu¹, Li Changhong¹, Ronghao Yu², Ruiwang Huang¹
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- 3998 Dynamic functional connectivity of the default mode network tracks daydreaming**
Aaron Kucy^{1,2}, Karen Davis^{2,1}
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- 3999 Recovery-related changes in brain metabolism in patients with disorders of consciousness**
Sarah Wannez¹, Aurore Thibaut¹, Camille Chatelle¹, Marie-Aurélien Bruno¹, Steven Laureys¹
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- 4000 Stimulus set meaning and neurophysiological differentiation: an fMRI study**
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- 4001 Elucidating dissociation in brain functional connectivity during hypnotic state. A rs-fMRI study**
Pablo Vázquez¹, Susan Whitfield-Gabrieli², Fernando Barrios^{1,2}
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- 4002 The role of body ownership in acupuncture treatment: peripheral and central mechanisms**
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- 4003 Neural basis for regulating parasympathetic activity during attending to bodily sensations**
HIROKI MURAKAMI¹, Ruri Katsunuma¹, Kentaro Oba², Yuri Terasawa¹, Yuki Motomura¹, Yusuke Kanayama¹, Kazuo Mishima¹, Takakazu Oka³, Yoshiya Moriguchi¹, Hiroshi Matsuda¹
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- 4004 Relationship between motor intention and readiness potential based on single-trial analysis**
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- 4005 EEG entropy measures reveal altered task-induced brain activity in Disorders of Consciousness**
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- 4006 Perceptual closure and top-down processing in schizophrenia patients and synesthetes: An MEG study**
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- 4007 Disruption of Front-to-Back Phase Relation of Alpha Activity after Propofol-Induced Unconsciousness**
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- 4008 Disturbance of Information Flow of Intra-frontal lobe in Anesthetic-induced Unconsciousness**
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- 4009 Insular cortex activity reflects cardio-visual conflict and heartbeat awareness: A 7T fMRI Study**
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- 4010 Inter-network fMRI functional connectivity is impaired in patients with consciousness alterations**
Athena Demertzi¹, Susan Whitfield-Gabrieli², Francisco Gómez³, Mohamed Ali Bahri⁴, Andrea Soddu⁵, Lizette Heine¹, Audrey Vanhaudenhuyse⁶, Luaba Tshibanda⁷, Vanessa Charland — Verville¹, Steven Laureys⁸
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- 4011 Hemispheric Asymmetry of Feed-forward and Feed-back Information Flow During Sleep and Anesthesia**
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- 4012 Stepwise non-linear deterioration of functional brain networks in consciousness disturbance**
Tun Jao¹, Wei-Che Lin², Manuel Sebastian Schröter¹, Ameera Patel¹, Chun-Yi Zuo³, Kun-Hsien Chou³, Ching-Po Lin³, Edward Bullmore¹
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- 4013 Unconscious Pattern Recognition: Cortical Processing of Imperceptible Somatosensory Pattern**
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- 4014 Conscious perception as the inner construct of a priori structures: neurophenomenology through fMRI**
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- 4015 EEG and fMRI agree: mental arithmetic is the most easily detectable form of imagery**
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- 4016 Breakdown of the Brain's Functional Network Modularity with Awareness**
Rene Marois¹, Douglass Godwin¹, Robert Barry¹
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- 4017 Altered default mode network structure in disorders of consciousness using dynamic causal modelling**
Julia Sophia Crone^{1,2}, Yvonne Höller³, Matthias Schurz⁴, Jürgen Bergmann⁵, Martin Kronbichler⁶
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- 4018 Thalamo-frontal connectivity mediates top-down cognitive functions in disorders of consciousness**
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- PERCEPTION: AUDITORY/VESTIBULAR**
- 4019 Neuroimaging Paradigms for Tonotopic Mapping (I): the Influence of Sound Stimulus Type**
Dave Langers¹, Julien Besle², Rosa Maria Sanchez Panchuelo³, Sue Francis³, Richard Bowtell³, Katrin Krumbholz², Deborah Hall¹
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- 4020 Neuroimaging Paradigms for Tonotopic Mapping (II): the Influence of Acquisition Method**
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- 4021 Sound Localization Performance Related to Auditory Cortical Structure in Unilaterally Deaf**
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- 4022 Pitch-related responses in right Heschl's gyrus correlate with musical skills in normal listeners**
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- 4023 Middle Latency Responses and the MMN both code for the regularity of auditory sequences**
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- 4024 BOLD fMRI activation for 30 Hz auditory steady state response**
Hiroshi Okamoto¹, Hironori Kuga^{1,2}, Itta Nakamura², Naoya Oribe^{1,2}, Sho Fukushima¹, Kanako Sejima¹, Shogo Hirano², Yoji Hirano³, Yuko Oda², Rikako Tsuchimoto², Toshiaki Onitsuka², Shigenobu Kanba², Takefumi Ueno¹
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- 4025 Auditory discrimination improvement from post-anoxic acute coma to long-term follow-up**
Elsa Juan¹, Athina Tzovara², Marina Pagliaro³, Mauro Oddo⁴, Micah Murray², Andrea Rossetti⁵, Marzia De Lucia²
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- 4026 Auditory cortex spatially realigns sound components while constructing coherent objects**
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- 4027 Modulation of Pre-attentive Temporal Feature Processing in the Human Auditory System by HD-tDCS**
Kai Heimrath¹, Carolin Breitling¹, Hans-Jochen Heinze¹, Tino Zaehle¹
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- 4028 Categorical versus sequential processing of sound duration**
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- 4029 Musical Training Effects and Cortical Plasticity: Relationships with Performance and Training Extent**
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- 4030 Electrophysiological evidence for sensory-driven synchronization deficits in beat deafness**
Kathrin Rothemich¹, Pauline Tranchant², Michael Schwartze³, Sonja Kotz^{3,4}, Isabelle Peretz²
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- 4031 Neural Correlates of Pitch and Timbre Variation in Human Auditory Cortex**
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- 4032 Behavioral and neural correlates of perceptual ambiguity in auditory stream segregation**
Susann Deike¹, Peter Heil², Martin Böckmann-Barthel³, Lena-Vanessa Dolleza⁴, Georg Klump⁴, Andre Brechmann¹
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- 4033 Tonotopic organization of the primary auditory cortex in partial deafness**
Katarzyna Ciesla¹, Tomasz Wolak¹, Monika Lewandowska¹, Mateusz Rusiniak¹, Agnieszka Pluta¹, Piotr Skarżyński^{1,2,3}, Artur Lorens¹, Henryk Skarżyński¹
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- 4034 The Representation of Sound Location (Azimuth) in Human Auditory Cortex**
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- 4035 Oscillatory predictors for the detection of near-threshold auditory stimuli**
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- 4036 Neuromagnetic responses of pitch variation in the temporal lobe: An MEG study**
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- 4037 Auditory Neural Response to MR Scanner Noise Measured with ECoG in Humans**
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- 4038 Brain Listening: Natural sounds re-synthesis from fMRI auditory cortical response patterns**
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- 4039 Response Latencies in Human Auditory Cortex: An Intracranial Electrophysiology Study**
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- 4040 Behavioural and Hemispheric Dissociation in the processing of voice and speech information**
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- 4041 Deviance detection in the human ascending auditory pathway: effects of stimulus repetition**
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- 4042 Auditory Brainstem Responses in the Human Auditory Cortex? Evidence from sEEG**
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- 4043 A Comparative fMRI Study on Vocalization Processing in Dogs and Humans**
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- 4044 Pre-stimulus intrinsic connectivity dynamics predict perception**
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- 4045 Melody difference in harmonic sequence effects on ERANm**
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PERCEPTION: MULTISENSORY AND CROSSMODAL

- 4046 Functional selectivity for looming and laterally moving sounds in the occipital cortex of the blind**
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- 4047 Shaping the Motor Cortex through Body Ownership Illusions**
Konstantina Kilteni¹, Jennifer Grau², Julià L. Amengual², Antoni Rodríguez-Fornells^{2,3,4}, Mel Slater^{1,4,5}
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- 4048 Audiovisual integration in lateral occipital-temporal cortex during a loudness judgment task**
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- 4049 Characterizing the topology of attentional and sensory network communication**
Mac Shine¹, Peter Bell²
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- 4050 A cortical hierarchy performs Bayesian Causal Inference for multisensory perception**
Tim Rohe¹, Uta Noppeney^{2,1}
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- 4051 Decoding color in grapheme-color synesthesia**
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- 4052 Gamma band oscillations reflect interactions between top-down attention and multisensory congruency**
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- 4053 How valence-learning influences audiovisual object and sound perception — An fMRI study**
Marcus Naumer¹, Alexandra Tinnermann¹, Jasper van den Bosch¹, Jochen Kaiser¹, Grit Hein²
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- 4054 Multisensory limb representation in the extrastriate body area**
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- 4055 Sound of car engine influences subjective rating of collision likelihood**
Ulrike Zimmer¹, Stefan Seger¹, Christian Poglitsch¹, Karl Koschutnig¹, Anja Ischebeck¹
¹University of Graz, Graz, Austria
- 4056 Superadditive processing of food flavor is modulated by insular and entorhinal cortex connectivity**
Janina Seubert^{1,2}, Kathrin Ohla³, Yoshiko Yokomukai⁴, Thilo Kellermann⁵, Johan Lundström^{1,2}
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- 4057 Attentional network recruitment in action video game players**
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- 4058 Cross-modal predictive mechanisms during speech perception**
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- 4059 Cross-modal functional recruitment in early blindness is sensory-specific: a meta-analysis**
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- 4060 Using Intersubject Correlation to compare brain activity across several audiovisual dance videos**
Frank Pollick¹, Marie-Helene Grosbras¹, Jukka-Pekka Kauppi², Jussi Tohka³
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- 4061 Audio-visual (a)synchrony and the ventriloquist illusion**
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- 4062 Neural activity during dyspnea anticipation is associated with subjective dyspnea intensity**
Nina Maslowski¹, Susann Lange¹, Carolin Kragen¹, Nicole Ebser¹, Hans-Ulrich Wittchen¹, Ulrike Lueken¹
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- 4063 Event-related neural activity during multisensory processing in schizophrenia**
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- 4064 Network patterns of audiotactile multisensory interactions — an MEG study**
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- 4065 Representation of Itch and Cooling in the human Spinal Cord using fMRI**
Missanga van de Sandt¹, Christian Sprenger¹, Christian Büchel¹
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- 4066 Visuo-tactile motion congruence enhances gamma-band responses in visual and somatosensory cortices**
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- 4067 Effect of sensory modality and attention on layer-specific activations in sensory cortices**
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- 4068 Transmodal parietal cortex connectivity predicts modality competition resolution capacity**
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- 4069 Insights from darkness: neural correlates of route navigation in congenital blindness**
Daniel-Robert Chebat¹, Shachar Maidenbaum², Amir Amedi³
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- 4070 Neural Mechanisms Underlying Rapid Temporal Recalibration During Multi-Sensory Integration**
Therese Lennert¹, Sylvain Baillet¹
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- 4071 State-dependent Modulation of Functional Connectivity in Congenitally Blind Individuals**
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- 4072 Is hMT+ multisensory?**
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- 4073 Cross-modal integration of coherent and incoherent audio-tactile cues in a 360° localization task**
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PERCEPTION: PAIN AND VISCERAL

- 4074 Cortical activation differences in fibromyalgia patients during observation of pain pictures**
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- 4075 Decoding interoceptive attention expertise from fMRI data**
Keyvan Kashkouli Nejad¹, Yushihito Furusawa¹, Kozo Nishino², Toshihiro Nukiwa¹, Motoaki Sugiura³, Takayuki Nozawa⁴, Yuka Kotozaki¹, Ryuta Kawashima⁴
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- 4076 Dissociating the neural mechanisms of pain consistency and pain intensity**
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- 4077 S1 functional connectivity is altered by sustained pain and associated with CAT in fibromyalgia**
Jieun Kim¹, Marco Loggia¹, Christine Cahalan², Richard Harris³, Ajay Wasan², Robert Edwards², Vitaly Napadow¹
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- 4078 Alterations in fMRI connectivity in twins discordant for urologic chronic pelvic pain syndrome**
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- 4079 Mindfulness-based stress reduction on chronic pain: Evidence based on resting-state fMRI**
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- 4080 Headache Associates with Cortical Thickness Changes in Multiple Regions**
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- 4081 Impaired pre-attentive auditory processing in fibromyalgia: A mismatch negativity study**
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- 4082 Expectations Modulate Long-Term Habituation to Heat Pain and Influence its Neural Correlates**
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- 4083 GRAY MATTER ALTERATIONS IN CHRONIC PAIN: A NETWORK-ORIENTED META-ANALYTIC APPROACH**
Franco Cauda¹, Sara Palermo², Tommaso Costa³, Riccardo Torta⁴, Sergio Duca⁵, Ugo Vercelli⁴, Karina Tatu⁴, Matteo Diano⁶, Diana Torta⁴
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- 4084 Neural circuitry of pain-related fear learning and memory retrieval in irritable bowel syndrome**
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- 4085 An MVPA study to characterize altered brain functionality in Medication Overuse Headache**
Diana Torta¹, Tommaso Costa², Emilio Luda¹, Sergio Duca³, Matteo Diano², Luciano Fava¹, Giuliano Geminiani², Franco Cauda⁴
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- 4086 The neuronal networks underlying interoceptive awareness**
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- 4087 Physiological brainstem mechanisms of trigeminal nociception: an fMRI study at 3T**
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- 4088 Bilateral disinhibition of the primary somatosensory cortex in patients with fibromyalgia**
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- 4089 Prestimulus alpha oscillation in somatosensory areas predicts subjective pain intensity**
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- 4090 S1 cortical thickness dissociates pain versus paresthesia dominance in carpal tunnel syndrome**
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- 4091 When pain is not only pain: Acupuncture in the context of a treatment**
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- 4092 Functional connectivity change in experimentally induced endogenous low back pain**
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- 4093 Focal changes in white matter integrity and pain symptom in fibromyalgia**
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- 4094 Shared Representations of Pain and Empathy for Pain — Evidence from Event-Related Potentials**
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- 4095 Chronic respiratory disease enhances neuronal processing of dyspnea in the right anterior insula**
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- 4096 Nociceptive mapping of the human spinal cord**
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- 4097 Is pain processing modality-specific? A comparison of two experimental pain models in healthy humans**
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- 4098 Association between colonic response to CRH in IBS and insular activity during rectal distension**
Michiko Kano¹, Tomohiko Muratsubaki¹, Mao Yagihashi¹, Joe Morishita¹, Huynh Giao Ly², Patrick Dupont², Lukas Van Oudenhove², Motoyori Kanazawa¹, Shin Fukudo¹
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- 4099 Brain Mechanisms of Habituation vs Sensitization to Dyspnea**
Maria Stoeckel¹, Roland Esser¹, Matthias Gamer¹, Christian Büchel¹, Andreas von Leupoldt^{2,1}
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- 4100 Imaging "Opioid-induced Hyperalgesia" after Withdrawal from Remifentanyl**
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- 4101 Nocebo treatment enhances pain signals in the human spinal cord**
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- 4102 Effects of Intranasal Oxytocin on Neural Correlates of Heat Pain Ratings**
Matthias Zunhammer¹, Volker Busch¹, Peter Eichhammer¹, Sandra Geis¹, Mark Greenlee²
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- 4103 Functional reorganization of the mesolimbic system in a rat model of chronic pain**
Marwan Baliki¹, Pei-ching Chang¹, Alex Baria¹, Maria Verginia Centeno¹, Daniel Prochissi¹, A. Vania Apkarian¹
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- 4104 Opposing Relationship between Anterior Insula Glutamate and Connectivity to the Default Mode Network**
Chelsea Cummmiford¹, Jieun Kim², Vitaly Napadow², Daniel Clauw¹, Richard Harris¹
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- 4105 Predictors for threshold-level pain perception in pre-stimulus oscillatory brain activity**
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- 4106 Amygdala and hippocampal volumes predispose the transition from subacute to chronic pain**
Etienne Vachon-Presseau¹, Marwan Baliki¹, Lejian Huang¹, Vania Apkarian¹
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- 4107 Obligatory response of primary somatosensory cortex to high-frequency nociceptive stimulation**
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¹University College London, London, United Kingdom, ²University of Rome, La Sapienza, Roma, Italy, ³Université Catholique de Louvain, Brussels, Belgium

- 4108 Self-regulation of rACC activation in Postherpetic Neuralgia using real-time fmri neurofeedback**
Min Guan¹, Lijia Ma¹, Liang Li², Li Tong², Meiyun Wang¹, Bin Yan², Dapeng Shi¹
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- 4109 Resting state connectivity analysis of locus of control in fibromyalgia**
Rachel Smallwood¹, David Williams², Amy Parkinson³, Simon Eickhoff⁴, Donald Robin⁵
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- 4110 Altered BOLD response of midbrain regions during airway stimulation in cough hypersensitive patients**
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- 4111 DMN deactivation: A possible neuroimaging biomarker of subjective pain intensity**
Ao Tan¹, Rui Chen², Li Zhang², Yiheng Tu¹, Yeung Sam Hung¹, Li Hu², Zhiguo Zhang³
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PERCEPTION: TACTILE/SOMATOSENSORY

- 4112 Intra-digit SI mapping of middle and little finger in left and right hand: A human fMRI study**
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- 4113 Differential effects of subliminal single pulse vs. train (7 Hz) stimulation**
Till Nierhaus¹, Arno Villringer²
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- 4114 Time course of haptic object recognition in humans**
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- 4115 Modulatory effects of sustained manual pressure stimulation according to Vojta: an fMRI study**
Pavel Hok¹, Petr Hlustik¹, Miroslav Kutín², Jaroslav Opavský³, Zbynek Tudos¹, Petr Kanovsky¹
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- 4116 A correlation study of behavioral and neural decoding performance for roughness discrimination**
Junsuk Kim¹, Heinrich Buelthoff², Sung-Phil Kim³, Yoon Gi Chung¹, Sang Woo Han¹, Soon-Cheol Chung⁴, Jang-Yeon Park⁴
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- 4117 Intra-digit distance within the Brodmann area 3 induced by vibrotactile stimulation: an fMRI study**
Mi Hyun Choi¹, Hyung-Sik Kim¹, Na Rae You¹, Ji Hye Back¹, Soon-Cheol Chung¹
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- 4118 MRI of the historical brain with the first specified divided central sulcus**
Renate Schweizer¹, Gunther Helms², Jens Frahm¹
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- 4119 Modulation of GABA and functional connectivity in sensorimotor cortex following perceptual learning**
Stefanie Heba¹, Nicolaas Puts², Tobias Kalisch³, Benjamin Glaubit¹, Lauren Haag⁴, Melanie Lenz¹, Hubert Dinse³, Richard Edden², Martin Tegenthoff¹, Tobias Schmidt-Wilcke¹
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- 4120 Impact of 5-HTTLPR Gene Risk Variant and Catastrophizing on the Neural Processing of Breathlessness**
Andreas von Leupoldt¹, Roland Esser², Matthias Gamer³, Christian Büchel⁴, Cornelia Stöckel⁵
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- 4121 Mild Hypothermia and Efficient Neural Responses in Core Thermoregulatory Regions: Novel fMRI Studies**
Otto Muzik¹, Richard White², Vaibhav Diwadkar²
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- 4122 Cortical adaptation in response to sustained vibrotactile stimulation: an fMRI study**
Yoon Gi Chung¹, Junsuk Kim¹, Sang Woo Han¹, Hyung-Sik Kim², Soon-Cheol Chung², Jang-Yeon Park², Sung-Phil Kim³
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- 4123 Evoking multiple steady-state responses toward characterization of the human somatosensory system**
Teodoro Solis Escalante¹, Martijn Vlaar¹, Yuan Yang¹, Alfred Schouten^{1,2}, Frans van der Helm¹
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- 4124 A MRI Compatible Design of vibrotactile Device using Piezoelectric actuator with Cone Structure**
Shih-Wen Liao¹, Chao-Hsien Hsieh², Chang-Wei Hsieh³, Chin-Fu Tsai¹
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- 4125 Brain Mechanisms for Gentle Touch Processing**
Monika Davidovic¹, Göran Starck², Håkan Olausson¹
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- 4126 The specificity of placebo effects in somatosensation — An fMRI study**
Eva-Maria Seidel¹, Markus Abrahamczik¹, Allan Hummer², Christian Windischberger³, Giorgia Silani⁴, Claus Lamm¹
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- 4127 The phase of prestimulus α oscillations in S1 influences tactile temporal perceptual discrimination**
Thomas Baumgarten¹, Alfons Schnitzler¹, Joachim Lange¹
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- 4128 Spatial variability in a multicenter fMRI study**
Jakob Rath¹, Moritz Wurnig¹, Nicolaus Klinger¹, Ilse Höllinger¹, Alexander Geissler¹, Florian Fischmeister¹, Markus Aichhorn², Thomas Foki¹, Martin Kronbichler², Janpeter Nickel³, Christian Siedentopf⁴, Wolfgang Staffen⁵, Michael Verius⁴, Stephan Felber⁶, Stefan Golaszewski⁵, Florian Koppelstaetter⁴, Rüdiger Seitz³, Roland Beisteiner¹
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- 4129 Resolving robust and reproducible digit topography in primary somatosensory cortex at 7 tesla**
James Kolasinski¹, Tamar Makin¹, Saad Jbabdi¹, Charlotte Stagg¹, Heidi Johansen-Berg¹
¹University of Oxford, Oxford, United Kingdom
- 4130 Neural correlates of sensory awareness during tactile threshold of stimulus detection task**
Jonni Hirvonen¹, Matias Palva¹, Satu Palva¹
¹University of Helsinki, Helsinki, Finland
- 4131 Dedicated low-noise EEG / MEG systems can detect somatosensory evoked responses at 1 kHz**
tommaso fedele¹, Rainer Körber², Hans Juergen Scheer³, Martin Burghoff³, Gabriel Curio¹
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- 4132 How prior information biases decisions during tactile frequency discrimination**
Aline Bompas¹, Gaëtan Sanchez¹, Jérémie Mattout¹
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- 4133 Brain Regions Activated during Tactile Stimulation in Healthy Individuals: An ALE meta-analysis**
Leeanne Carey^{1,2}, Susan Palmer¹, Ayla Barutcu¹, Essie Low¹, Gemma Lamp¹
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PERCEPTION: VISUAL

- 4134 The role of the fusiform and inferior occipital gyrus in face processing: an ALE meta-analysis**
Yvonne Hoehner¹, Simon Eickhoff¹, Veronika Müller¹
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- 4135 Striatal activation as a neural link between cognitive and perceptual flexibility**
Maria Sekutowicz¹, Christine Stelzel¹, Katharina Schmack¹, Rosa Steimke¹, Lena Paschke¹, Philipp Sterzer¹, Henrik Walter¹
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- 4136 Individual emotional relevance determines the neural representation of objects in visual cortex**
Katharina Schmack¹, Philipp Sterzer¹
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- 4137 Insular cortex and thalamus are pivotal components for the concept of difficulty**
Yulwan Sung¹, Yousuke Kawachi², Uk-Su Choi³, Seiji Ogawa²
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- 4138 Ultrafast Inverse Imaging of the Human Face Recognition System**
Kevin Tsai^{1,2,3}, Jaakko Kauramäki¹, Mikko Lähteenmäki¹, Lauri Nummenmaa^{1,2,4}
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- 4139 Electrical Stimulation Reduces Right Lateralization of N170 and Holistic Face Processing**
Li-Zhuang Yang¹, Wei Zhang¹, Bin Shi², Zhengde Wei¹, Feng Gu¹, Ying Liu², Alan Wong³, Hengyi Rao⁴, Xiaochu Zhang¹
¹University of Science and Technology of China, Hefei, China, ²Provincial Hospital Affiliated to Anhui Medical University, Hefei, China, ³Chinese University of Hong Kong, Shatin, Hong Kong, ⁴University of Pennsylvania, Philadelphia, PA
- 4140 Investigating hippocampal and cortical activations elicited by watching indistinct motion stimuli**
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- 4141 Depth of interocular suppression and BOLD activation in dorsal and ventral stream**
Karin Ludwig^{1,2}, Norbert Kathmann², Philipp Sterzer¹, Guido Hesselmann¹
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- 4142 Prediction error signals for visuo-motor mismatch in human prefrontal cortex**
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- 4143 Decoding Action Concepts at Different Levels of Abstraction — an MVPA Study**
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- 4144 Eye movement segmentation of EEG activity related to memory encoding**
*Andrey Nikolaev*¹, *Chie Nakatani*¹, *Peter Jurica*², *Gijs Plomp*³, *Cees van Leeuwen*¹
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- 4145 How is the body (and its parts) represented in visual cortex?**
*Stefania Bracci*¹, *Alfonso Caramazza*^{1,2}, *Marius Peelen*¹
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- 4146 The neural basis of reward-reinforced perceptual inference during binocular rivalry**
*Gregor Wilbertz*¹, *Bianca van Kemenade*², *Katharina Schmack*³, *Philipp Sterzer*⁴
¹Charité, Berlin, Germany, ²Berlin School of Mind & Brain, Berlin, Germany, ³Charité Universitätsmedizin, Berlin, Germany, ⁴Department of Psychiatry and Psychotherapy, Campus Charité Mitte, Berlin, Germany
- 4147 Interaction between the dorsal and ventral visual systems during 3D-SFM: an MEG-fMRI study**
*Sunao Iwaki*¹, *Giorgio Bonmassar*², *John Belliveau*²
¹National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, ²Massachusetts General Hospital/Harvard Medical School, Boston, MA
- 4148 Perception's shadow: distinct gamma activity sources and sub-bands as revealed by ECoG**
*Joao Castelano*¹, *Isabel Catarina Duarte*², *Francisco Sales*³, *Miguel Castelo-Branco*⁴
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- 4149 Suboccipital Intracranial EEG Recordings for Visual Objects: ERP Evidence for Distributed Processing**
Terrance Darcey^{1,2}, *Howard Hughes*³, *Peter Williamson*¹, *Vijay Thadani*¹, *David Roberts*²
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- 4150 Neural substrate of stimuli representation in the posterial lateral occipital complex of human brain**
*Huang Huang*¹, *Delong Zhang*², *Bishan Liang*¹, *Bingqing Jiao*¹, *Jinghua Pan*¹, *Ruiwang Huang*¹, *Ming Liu*¹
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- 4151 Hunger blurs your vision: Modulation of brain activity to visual stimulation after prolonged fasting**
*Nils Kohn*¹, *Mark Berthold-Losleben*², *Natalya Chechko*², *Wolfram Kargese*³, *Stelios Orfanos*², *Sebastian Vocke*², *Annette Wassenberg*², *Caren Weidenfeld*², *Timur Toygar*⁴, *Frank Schneider*⁵, *Ute Habel*⁶
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- 4152 Resolving human object recognition in space and time**
*Radoslaw Cichy*¹, *Dimitrios Pantazis*², *Aude Oliva*¹
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- 4153 The Human Amygdala Encodes the Spatial Location of Social Stimuli**
Matthias Gamer¹, Christian Büchel¹
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- 4154 Blinks and Eye Closures: More Happening in the Brain than Meets the Eye**
Danyang Kong¹, Ju Lynn Ong¹, David Richards², Michael W. L. Chee¹
¹Center for Cognitive Neuroscience, Duke-NUS Graduate Medical School, Singapore, Singapore, ²Biomedical Engineering Department, Viterbi School of Engineering, University of Southern California, Los Angeles, USA
- 4155 Large versus fine-scaled connectivity in visual cortex; a 7 Tesla fMRI study**
Mathijs Raemaekers¹, Wouter Schellekens¹, Nick Ramsey¹
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- 4156 Neural mechanisms of facial expression recognition with and without visual awareness: An MEG Study**
Jaakko Kauramäki^{1,2}, Mikko Lähteenmäki¹, Lauri Nummenmaa^{3,4,1}
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- 4157 Unpredictable motion enhances bottom-up processing in visual cortex**
Thilo Kellermann¹, Ruben Scholle¹, Frank Schneider¹, Ute Habel¹
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- 4158 Decoding the semantic feature properties of objects from fMRI activity during an object naming task**
ANDREAS MAROUCOS¹, BARRY DEVEREUX¹, ALEX CLARKE¹, Lorraine Tyler¹
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- 4159 Neural Repetition Suppression: Evidence for Perceptual Expectation in Object-Selective Regions**
Lisa Mayrhauser¹, Jürgen Bergmann², Julia Crone^{1,2}, Martin Kronbichler^{1,2}
¹University of Salzburg, Centre for Neurocognitive Research and Department of Psychology, Salzburg, Austria, ²Christian-Doppler Clinic, Paracelsus Medical University, Neuroscience Institute, Salzburg, Austria
- 4160 Pre-Stimulus Network Activity predicts Phosphene Perception: A TMS/EEG Study**
Thomas Hartmann¹, Nathan Weisz¹
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- 4161 Electrophysiological Correlates of Visual Crowding**
Vitaly Chicherov¹, Gijs Plomp², Michael Herzog¹
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- 4162 Effect of object identity on fMRI activation patterns in the intraparietal sulcus**
Veerle Neyens¹, Rose Bruffaerts¹, Patrick Dupont¹, Rufin Vogels², Stefan Sunaert³, Rik Vandenberghe¹
¹Laboratory for Cognitive Neurology, KU Leuven, Leuven, Belgium, ²Laboratory for Neuro- and Psychophysiology, KU Leuven, Leuven, Belgium, ³Radiology Department, University Hospitals Leuven, Leuven, Belgium
- 4163 Neural Correlates of the Watercolor Effect**
Peggy Gerardin^{1,2}, Frédéric Devinck³, Mathieu Ruiz², Kenneth Knoblauch¹, Michel Dojat²
¹INSERM U846 Stem-Cell and Brain Research Institute, Department of Integrative Neurosciences, Bron, France, ²Grenoble Neuroscience Institute, INSERM U836, La Tronche, France, ³Université Rennes 2, CRPCC EA 1285, Rennes, France
- 4164 Using TMS-fMRI to investigate the neural correlates of visual perception**
Joana Leitao¹, Axel Thielscher², Johannes Tuennerhoff³, Uta Noppeney¹
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- 4165 A Magnetoencephalographic Study of Bistable Dynamic Object Grouping**
Timothy Gawne¹, Jefferey Killen², Allan Dobbins³
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- 4166 Intracranial Recording During Visual Motion Processing in human MT+**
Anna Gaglianese^{1,2}, Mariska Vansteensel¹, Ben Harvey³, Serge O. Dumoulin³, Nick Ramsey¹, Natalia Petridou²
¹Department of Neurosurgery, Brain Center Rudolf Magnus, University Medical Center Utrecht, Utrecht, Netherlands, ²Department of Radiology/Image Sciences Institute, University Medical Center Utrecht, Utrecht, Netherlands, ³Experimental Psychology, Helmholtz Institute, Utrecht University, Utrecht, Netherlands
- 4167 Cortical thickness of area MT+ predicts perceptual learning of a motion-defined feature conjunction**
Sebastian Frank¹, Eric Reavis¹, Mark Greenlee², Peter Tse¹
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- 4168 Investigating the spatial precision of feedback to V1 using 3T and 7T imaging**
Lucy Petro¹, Fraser Smith², Jan Zimmermann³, Federico DeMartino³, Lars Muckli¹
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- 4170 Fluctuating intrinsic activity in V1 and V2 and visual consciousness**
Afra Wohlschlaeger¹, Junming Shao^{1,2}, Valentin Riedl¹, Johanna Löser¹, Lina Köhler¹, Susana Lourenço¹, Christian Sorg¹
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- 4171 Turning bodies into actions: fMRI reveals a functional link between M1 and EBA**
Guido Orgs¹, Anna Dovern², Nobuhiro Hagura³, Patrick Haggard³, Gereon Fink², Peter Weiss⁴
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- 4172 Perceptual learning in patients with central vision loss**
Mark Greenlee¹, Katharina Rosengarth¹, Carolin Schmalhofer¹, Markus Goldhacker¹, Susanne Hammer¹, Sabine Brandl-Rühle², Tina Plank¹
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- 4173 Beta power increase predicts detection of upcoming near-threshold stimuli**
Philipp Ruhnau¹, Nathan Weisz¹
¹Università degli Studi di Trento, Mattarello, Italy
- 4174 Detection of small simulated scotoma using population receptive field mapping**
Allan Hummer¹, Ronald Sladky¹, Markus Ritter², Martin Küblböck¹, Ursula Schmidt-Erfurth², Christian Windischberger¹
¹MR Centre Of Excellence, Medical University Of Vienna, Vienna, Austria, ²Department of Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria
- 4175 Functional connectivity network breakdown and restoration in blindness**
Michal Bala¹, Carolin Gall¹, Christian Moewes¹, Anton Fedorov¹, Hermann Hinrichs¹, Bernhard Sabel¹
¹Otto von Guericke University, Magdeburg, Germany
- 4176 Reduced accuracy to perceived walking direction of 3D point light walkers after rTMS to pSTS**
Nicholas Adam Peatfield¹, Lorella Battelli²
¹Center for Neuroscience and Cognitive Systems@UniTn, Italian Institute of Technology & CiMeC UniTn, Trento, Italy, ²Center for Neuroscience and Cognitive Systems@UniTn, Italian Institute of Technology, Rovereto, Italy
- 4177 A confidence signal in ventral striatum and its role in perceptual learning**
Matthias Guggenmos¹, Martin Hebart², Shea Karst³, Gregor Wilbertz³, Philipp Sterzer³
¹BCCN Berlin, Berlin, Germany, ²Universitätsklinikum Hamburg-Eppendorf, Hamburg, Germany, ³Charité Universitätsmedizin Berlin, Berlin, Germany
- 4178 The neural correlates of conscious and unconscious gaze processing**
Apoorva Rajiv Madipakkam^{1,2,3}, Marcus Rothkirch^{1,3}, Matthias Guggenmos^{4,1,3}, Philipp Sterzer^{1,4,3}
¹Visual Perception Laboratory, Charité — Universitätsmedizin Berlin, Berlin, Germany, ²International Graduate Program Medical Neuroscience, Charité — Universitätsmedizin Berlin, Berlin, Germany, ³Berlin Center for Advanced Neuroimaging, Berlin, Germany, ⁴Bernstein Center for Computational Neuroscience, Berlin, Germany

- 4179 Neural Transient in Visual Cortex Suppresses Cortical Variability and Stabilizes Bistable Perception**
Niels Kloosterman¹, Tomas Knapen², Arjan Hillebrand³, Bob van Dijk³, Victor Lamme¹, Tobias Donner⁴
¹University of Amsterdam, Amsterdam, Netherlands, ²VU University, Amsterdam, Netherlands, ³VU University Medical Center, Amsterdam, Netherlands, ⁴Department of Psychology, University of Amsterdam, Amsterdam, Netherlands
- 4180 Retinotopic representation of binocular stimuli in early visual cortex**
Martijn Barendse^{1,2}, Bas Rokers², Serge O. Dumoulin¹
¹Experimental Psychology, Helmholtz Institute, Utrecht University, Utrecht, Netherlands, ²University of Wisconsin-Madison, Madison, WI
- 4181 Brain responses accompanying unnoticed switches in dominance during binocular rivalry**
Jan Brascamp^{1,2}, Randolph Blake^{3,4}, Tomas Knapen^{5,2}
¹Helmholtz Institute and Division of Experimental Psychology, Utrecht University, Utrecht, Netherlands, ²Brain and Cognition, University of Amsterdam, Amsterdam, Netherlands, ³Vanderbilt Vision Research Center, Vanderbilt University, Vanderbilt, TN, ⁴Department of Brain and Cognitive Sciences, Seoul National University, Seoul, Korea, Republic of, ⁵Cognitive Psychology, VU University, Amsterdam, Netherlands
- 4182 Specificity for movements in category-specific regions of extra-striate cortex**
Annalisa Tosoni¹, Roberto Guidotti², Giorgia Committeri³, Cosimo Del Gratta⁴, Carlo Sestieri⁵
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- 4183 Supine positioning does not affect direction estimation accuracy**
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- 4184 Prior experience modulates activation patterns corresponding to Mooney images in the left fusiform**
Jessica Gool¹, Ming Meng¹
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- 4185 Real-world scene categories, but not depth, are exhibited by feedback to occluded areas of V1**
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- 4186 Transfer of contextual information across saccades in V1**
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- 4187 fMRI Evidence for Face Recognition by Visual Words**
Sennay Ghebreab¹, Cees Snoek¹, Victor Lamme¹, Arnold Smeulders¹, H. Steven Scholte¹
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- 4188 Trans-saccadic integration of visual feature information in human cortex**
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- 4189 Modulation of beta-band activity in human visual cortex by covert perceptual decisions**
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- 4190 Visual prediction biases late conscious but not early brain responses to deviant stimuli**
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- 4191 Dissociation of neural correlates during the perception of left and right eye gaze**
Kristin Marie Zimmermann¹, Andreas Jansen¹
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- 4192** **Cortical feedback: spatial frequency content and generalisation to feedforward signals**
Yulia Revina¹, Isa Rao¹, Lucy Petro¹, Fraser Smith¹, Lars Muckli¹
¹University of Glasgow, Glasgow, United Kingdom
- 4193** **Functional Reorganization of the Visual Dorsal Stream in Williams Syndrome**
Inês Bernardino¹, Jose Rebola¹, Eduardo Silva², Miguel Castelo-Branco¹
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- 4194** **Investigating the effect of stimulus & task on top-down influences to V1 using fMRI**
Matthew Bennett¹, Lucy Petro¹, Lars Muckli¹
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- 4195** **Visual Cortex Responds to Multisensory Stimulation and Experience of Rubber Hand Illusion**
Fiona McGruer¹, Luca Vizioli¹, Fraser Smith², Jakob Hohwy³, Lars Muckli¹
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- 4196** **Neural correlates of spontaneous fluctuations of visual awareness: A simultaneous EEG/fMRI study**
Joshua LaRocque¹, Adam Riggall¹, Robert Turner¹, Olivia Gosseries¹, Jason Samaha¹, Giulio Tononi¹, Bradley Postle¹
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- 4197** **Neural Account of Visual Simplicity and Prototypicality**
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SLEEP AND WAKEFULNESS

- 4198** **Classifying Sleep Stages with Heart Rate Variability and Resting State fMRI**
Michael Marxen¹, Marko Lehmann¹, Enzo Tagliazucchi², Helmut Laufs³, Hagen Malberg¹, Sebastian Zaunseder¹
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- 4199** **Intrinsic Cortical Organization of Well-Rested Individuals Vulnerable to Sleep Deprivation**
BT Thomas Yeo¹, Jesisca Tandi², Ju Lynn Ong², Christopher Asplund³, Danyang Kong², Michael W. L. Chee⁴
¹National University of Singapore, Singapore, Singapore, ²Duke-NUS Graduate Medical School, Singapore, Singapore, ³Yale-NUS College, Singapore, Singapore, ⁴Center for Cognitive Neuroscience, Neuroscience Program, Duke-NUS Graduate Medical School, Singapore, Singapore
- 4200** **A BOLD Signature of Drowsiness: Neural Correlates of Eye Closure during Sleep Deprivation**
Ju Lynn Ong¹, Danyang Kong¹, Tiffany Chia², Christopher Asplund³, Michael W. L. Chee²
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- 4201** **Diminished auditory responses during NREM sleep correlate with the hierarchy of language processing**
Meytal Wilf¹, Michal Ramot¹, Edna Furman-Haran¹, Anat Arzi¹, Yechiel Levkovitz², Rafi Malach¹
¹Weizmann Institute of Science, Rehovot, Israel, ²Tel Aviv University, Tel Aviv, Israel
- 4202** **Reduced Resting state Amygdala-DLPFC Functional Connectivity after 36 Hours of Sleep Deprivation**
Yongcong Shao¹, Yu Lei¹, Lubin Wang¹, Tianye Zhai¹, Wei Ni¹, Enmao Ye¹, Zheng Yang¹
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- 4203 Differences in Functional Connectivity between normal and recovery sleep in major brain networks**
Rebecca Wilson¹, Stephen Mayhew¹, David Rollings^{1,2}, Soroosh Afyouni^{1,3}, Aimée Goldstone¹, Sakh Khalsa^{1,4}, Theodoros Arvanitis³, Andrew Bagshaw¹
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- 4204 Verification of alpha rhythm hemispherical dominance using simultaneous EEG-fMRI registration**
Mateusz Rusiniak¹, Monika Lewandowska¹, Tomasz Wolak¹, Rafal Milner¹, Katarzyna Cieślą¹, Agnieszka Pluta¹, Henryk Skarżyński¹
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- 4205 Sleep stage-specific alterations of complexity using fMRI**
Pei-Jung Tsai¹, Yu-Ting Ko², Yu-Chin Wu³, Po-Yu Liu⁴, Sharon Chia-Ju Chen⁵, Changwei W. Wu⁶, Ching-Po Lin⁷, Chun-Yao Hsu⁸
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- 4206 Cerebral Blood Flow and Neuronal Oscillations during Sleep are Anti-correlated**
Laura Tüshaus^{1,2}, Anthony Schläpfer^{3,2}, Ruth O'Gorman^{4,5}, Andrea Federspiel⁶, Roger Lüscher⁷, Philipp Stämpfli^{8,9}, Daniel Brandeis^{3,2,5,10}, Thomas Koenig⁶, Peter Achermann^{1,2,5}
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- 4207 Sensory Cortical Sources of the Auditory and Somatosensory Evoked K-complexes**
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- 4208 Altered inter-hemispheric resting state functional connectivity after sleep deprivation**
Karl Koschutnig¹, David Fink¹, Gernot Reishofer², Andreas Fink³
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- 4209 Spatial Reorganization of Transverse EEG Linkage upon Awakening**
Pai-Chuan Hung¹, Yu-Ting Ko¹, Pei-Jung Tsai², Yu-Chin Wu³, Po-Yu Liu⁴, Ching-Po Lin⁵, Changwei W. Wu¹
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- 4210 Network-specific Changes of Low-Frequency Power during NREM Sleep**
Yu-Ting Ko¹, Chun-Yao Hsu², Pai-Chuan Hung³, Pei-Jung Tsai⁴, Yu-Chin Wu⁵, Sharon Chia-Ju Chen⁶, Po-Yu Liu⁷, Ching-Po Lin⁸, Changwei W. Wu¹
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Physiology, Metabolism and Neurotransmission

CEREBRAL METABOLISM AND HEMODYNAMICS

- 4211 Modeling the role for osmotic forces in the cerebrovascular response to CO₂**
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- 4212 Glucose Metabolism and Resting fMRI in Healthy Controls and Subjects with Temporal Lobe Epilepsy**
Allison Nugent¹, William Theodore², Carlos Zarate, Jr³
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- 4213 Perfusion Measurements at 7T using Pulsed Arterial Spin Labelling and Simultaneous Multi-slice EPI**
Dimo Ivanov¹, Benedikt Poser¹, Laurentius Huber², Josef Pfeuffer³, Kamil Uludağ¹
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- 4214 Regional Variability in Delay of Brain Response to Resting State End-Tidal CO₂ Fluctuation**
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- 4215 Measurement of perfusion and permeability using a single full dose contrast injection**
Todd Parrish¹, Greeshma Chilukuri², Jayathirenuka Varadheeswaran³, Xue Wang⁴, Yufen Chen⁵
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NEUROPHYSIOLOGY OF IMAGING SIGNALS

- 4216 Temporal frequency responses of human lateral geniculate nucleus and primary visual cortex in fMRI**
Ali Bayram¹, Esin Karahan², Başar Bilgiç³, Ahmet Ademoglu^{2,4}, Tamer Demiralp⁵
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- 4217 Depth and tissue dependent BOLD hemodynamic response characteristics in human visual cortex**
Jung Hwan Kim¹, Reswanul Khan², Chandrajit Bajaj², David Ress¹
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- 4218 Investigating frequency-specific electrophysiological correlates of spontaneous fMRI activity**
Catie Chang¹, David Leopold¹, Marieke Schölvinck², Jeff Duyn¹
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- 4219 Time-resolved identification of phase-amplitude cross-frequency coupling in neural oscillations**
Soheila Samiee¹, Sylvain Baillet¹
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- 4220 BOLD and CBF post-stimulus undershoots are correlated with post-stimulus neuronal activity in humans**
Karen Julia Mullinger^{1,2}, Stephen Mayhew², Andrew Bagshaw², Richard Bowtell¹, Susan Francis¹
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- 4221 Contribution of Neurovascular Factors to Resting-State fMRI Functional Connectivity**
Sungho Tak¹, Danny JJ Wang², Jonathan Polimeni³, Lirong Yan², J. Jean Chen¹
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- 4222 Electrocortical Dynamics Across Human Parietal Cortex During Task and Resting-State Conditions**
Brett Foster¹, Vinitha Rangarajan¹, Josef Parvizi¹
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- 4223 What can MEG reveal about the neuronal activity underlying positive and negative BOLD responses?**
Stephen Mayhew¹, Karen Julia Mullinger², Matthew Brookes²
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- 4224 Altered functional connectivity of rhesus brain during increasing levels of isoflurane**
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- 4225 Frequency Specificity of Energy Distribution in The Resting Brain: An fMRI Study**
Yifeng Wang¹, Zhiliang Long¹, Feng Liu¹, Ling Zeng¹, Huaifu Chen¹
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- 4226 Lag structure in resting state fMRI**
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- 4227 Sound-evoked activity in the mouse brain using Manganese-enhanced MRI**
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- 4228 Single-Dose Serotonergic Stimulation shows Widespread Effects on Functional Connectivity**
Bernadet Klaassens^{1,2,3}, Helene van Gorpel⁴, Najmeh Khalili-Mahani³, Jeroen van der Grond², Mark van Buchem^{1,2}, Bradley Wyman⁵, Joop van Gerven⁴, Serge A. Rombouts^{1,2,3}
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- 4229 Effects of CYP2D6 genotype on baseline perfusion under placebo and paroxetine**
Julia Stingl¹, Lisa Echle², Birgit Abler³, Roberto Viviani³
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- 4230 What could be the best method for pharmacological MRI: BOLD or ASL?**
Jack Foucher¹, Daniel Roquet², Andreas Bruns³, Catherine Kindo⁴, Heide Marie Kletzl⁵, Markus von Kienlin⁵
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- 4231 A combined genetic and pharmacological EEG Study of 5-HT Effects on Monitoring and Control Functions**
Adrian Fischer¹, Kubisch Christian², Martin Reuter³, Markus Ullsperger⁴
¹Otto von Guericke University Magdeburg, Magdeburg, Germany, ²University of Ulm, Ulm, Germany, ³Department of Psychology, University of Bonn, Bonn, Germany, ⁴Radboud University, Nijmegen, Netherlands
- 4232 Evidence for increased dopamine release by oxytocin in autism using [18F] desmethoxyfallypride PET**
Anna Gossen^{1,2}, Lina Winkler¹, Christoph Kowalewski¹, Holger Schorn¹, Katja Spreckelmeyer³, Oliver Winz¹, Siamak Mohammedkani-Shali¹, Robert Schultz⁴, Felix Mottaghy¹, Gerhard Gründer^{1,2}
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Social Neuroscience

SELF PROCESSES

- 4233 Neural activities in response to both self-evaluation and feedback from others predict self-esteem**
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- 4234 Self-affirmation enhances neurophysiological responsiveness to monetary outcomes**
Ruolei Gu¹, Huajian Cai¹, Yu Luo¹, Yuanyuan Shi¹, Jing Yang¹
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- 4235 Changes in the interdependent self-construal modulate neural representations between self and mother**
Pin-Hao Chen¹, William Kelley², Todd heatherton³
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- 4236 Electrophysiological correlates of auditory verbal self-monitoring in healthy subjects**
Thomas Koenig¹, Thomas Dierks¹, Daniela Hubl¹, Werner Strik¹, Rahel Schneider¹, Mara Kottlow¹
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- 4237 Trait or task focus on cognitive performance impacts on motivation and task activation**
Alva Appelgren¹, Sara Bengtsson¹
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- 4238 Influence of social stress and urbanicity on neural stress processing — an fMRI study**
Bernd Kraemer¹, Mohammad Al-Bayati¹, David Zilles¹, Jens Pruessner², Oliver Gruber¹
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- 4239 Psychosocial vs. physiological — an ALE meta-analysis on the neural correlates of stress reactions**
Lydia Kogler^{1,2,3}, Veronika Müller^{4,5}, Amy Chang¹, Simon Eickhoff^{4,5}, Ruben Gur², Birgit Derntl^{1,3}
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- 4240 Orienting the Self: A 7 Tesla study of self-orientation in spatial, temporal and personal domains**
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- 4241 The young & the hopeless?—The influence of musical mood induction on self-evaluation in adolescents**
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- 4242 Attachment style-dependent dynamic recruitment of emotional brain networks**
Anna Linda Krause^{1,2}, *Meng Li*^{1,3}, *Marie-Jose van Tol*⁴, *Bernhard Bogerts*², *Coraline Metzger*^{1,2,5}, *Tobias Nolte*^{6,7}, *Martin Walter*^{1,2,5,8}
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- 4243 Rs-fMRI shows Disconnections in Own Body Perception Areas in Female to Male Transsexuals**
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- 4244 Interdependent self-construal priming triggers the spontaneous down-regulation of positive emotions**
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- 4245 Consequences of artificiality, aesthetic and pragmatic judgments on processing of visual scenes**
Marion Behrens^{1,2}, *Pascal Nicklas*³, *Christian Alexander Kell*⁴
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- 4246 An exploratory fMRI study into inferences of self-agency**
*Neeltje van Haren*¹, *Robert Renes*², *Henk Aarts*², *Matthijs Vink*¹
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- 4247 Loneliness predicts neural responses to self and friend judgments in adolescents**
*Sabrina Golde*¹, *Lydia Pöhlend*², *Robert Lorenz*³, *Patricia Pelz*⁴, *Andreas Heinz*⁵, *Diana Raufelder*⁶, *Anne Beck*⁷
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- 4248 In search of the “auditory self”: Electrophysiological indicators of early self-related processing**
*Christoph Justen*¹, *Cornelia Herbert*²
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SOCIAL COGNITION

- 4249 A Trait and Agent memory code is represented in the medial prefrontal cortex**
*Frank Van Overwalle*¹, *Elien Heleven*²
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- 4250 The influence of group membership on the neural response when punishing and rewarding others**
*Pascal Molenberghs*¹, *Rebecca Bosworth*¹, *Zoie Nott*¹, *Winnifred Louis*¹, *Joanne Smith*², *Kathleen Vohs*³, *Catherine Amiot*⁴, *Jean Decety*⁵
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- 4251 Parcellation of the dorsolateral prefrontal cortex in discrimination of subliminal emotions**
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- 4252 Is self-similarity a good predictor of spontaneous VMPFC activity during emotional face processing?**
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- 4253 The causal role of the posterior medial prefrontal cortex in perspective-taking: a rTMS study**
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- 4254 The role of the rTPJ in attention and social interaction as revealed by ALE meta-analysis**
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- 4255 When I see you smile: Alexithymia decreases emotional brain responses to social reward**
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- 4256 Neural correlate of the persistence of to-be-ignored reputations**
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- 4257 The human posterior medial cortex: attention, objects, space & perspective**
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- 4258 Divergent Effects of Spatial Attention on the Two-Stage Processing of Disgust and Fear**
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- 4259 fMRI inter-subject correlations during viewing of comedy movies explained by experienced humor**
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- 4260 Loneliness-related Small-world Structural Networks in Young Adults: a DTI Tractography Study**
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- 4261 The EmpaToM: A Novel FMRI-Task Separating Affective and Cognitive Routes to Social Cognition**
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- 4262 Social and incentive contexts modulate distinct mechanisms of perceptual decision making processes**
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- 4263 Dynamic interactions of functional networks during a complex social cognition task**
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- 4264 Social decisions affect neural activity to perceived dynamic gaze**
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- 4265 The brain network underlying the recognition of gestures in the blind: the supramodal role of EBA**
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- 4266 Interaction between TPJ and the medial prefrontal cortex for the inference of other's sadness**
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- 4267 Amygdala-activation differentiates emotional and motoric imitation**
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- 4268 Individuals' neural circuitry predicts their prosocial motives**
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- 4269 Sex differences in the neuromagnetic response to body motion**
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- 4270 Temporal unpredictability in a stimulus sequence: effects of emotional context**
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- 4271 Task and stimulus features modulate brain activity during observation of facial expressions**
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- 4272 Distinct facets of empathy differentially modulate spontaneous brain activity at rest**
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- 4273 Right TPJ stimulation shifts the balance between individual cost and the other's benefit**
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- 4274 Fractionating Theory of Mind: A meta-analysis of functional brain imaging studies**
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- 4275 Neural encoding of character traits**
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- 4276 Biological motion selectivity is correlated with social network size, diversity, and complexity**
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- 4277 Implicit false-belief processing in the human brain**
Dana Schneider^{1,2}, Virginia Slaughter², Stefanie Becker², Paul Dux²
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²The University of Queensland, Brisbane, Australia
- 4278 Social vs. non-social self-blame in the brain: Differentiating guilt and regret with fMRI**
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- 4279 Social sharing of emotions activates the neural reward circuitry**
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- 4280 Your Brain's Functional Connectivity Predicts Your Spontaneous Behavior in The Face of Temptation**
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- 4281 The Neural Mechanisms of Compassion-based Emotion Regulation in Expert Meditators: An fMRI Study**
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- 4282 Effects of oxytocin on the processing of sub-liminally presented social-emotional cues**
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- 4283 Are you mocking me?! EEG responses during an animated "Theory of Mind" paradigm**
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- 4284 Self-promotion is associated with intrinsic functional connectivity of self-related cortical regions**
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- 4285 The contribution of intracranial EEG to research on the empathy for**
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- 4286 Oxytocin enhances auditory emotional conflict resolution**
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- 4287 Neural Correlates of Gaze Duration Processing in High-Functioning Autism**
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- 4288 Comparing social and symbolic cues in a spatial cueing task: an fMRI study**
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- 4289 Expert Compassion Meditators Show Cortical Thickness Increases In Socio-Affective Brain Networks**
Leon Skottnik¹, Boris Bernhardt¹, Haakon Engen¹, Sofie Valk¹, Bram Cordemans¹, Matthieu Ricard², Tania Singer¹
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- 4290 Individual Differences in Cross-Race Bias Modulate fMRI Adaptation to Same and Other Race Faces**
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- 4291 Sensitivity to animacy judgments occurs in hMT+ despite controlled motion properties**
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- 4292 Reading other minds: Social brain dysfunction in autism and schizophrenia**
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- 4293 Subdifferentiation in the Human Dorsomedial Prefrontal Cortex**
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- 4294 Inflexible Thinking of Schizophrenia**
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- 4295 The impact of chemosensory social cues on emotion perception: an fMRI study**
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- 4296 The Neural Computation of Subjective Moral Value**
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- 4297 Effects of social group membership and affiliative signals on automatic imitation**
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- 4298 Watching assembly of a toy model entrains cortical activity of the observer to the constructor**
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- 4299 Adult brain responses to baby cries: gender differences during diverse cognitive states**
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- 4300 Social Cognition is related to brain white matter integrity in Parkinson disease**
Maria Diez-Cirarda¹, Naroa Ibarretxe-Bilbao¹, Javier Peña¹, Alberto Cabrera², Jose Ontañón², Ines Garcia-Gorostia³, Maria Gomez-Beldarrain³, Natalia Ojeda¹
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- 4301 The Crucial Role of Memory in the Resolution of Cognitive Dissonance**
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- 4302 Dissociable roles of the insular and ventromedial cortices in social norm learning**
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- 4303 Empirical Effect of ROI Size on Multivariate Bayesian Analysis of Voice and Body-Selective Areas**
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- 4304 Resting-state functional connectivity indexes emotion recognition bias**
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- 4305 Spectro-spatiotemporal characterization of inter-subject neuronal correlation during movie watching**
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SOCIAL INTERACTION

- 4306 Responsibility Increases Vicarious Activations to the Pain of Others**
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- 4307 Out of control: Evidence for anterior insula involvement in motor impulsivity and reactive aggression**
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- 4308 How do emotions modulate social interactions? An fMRI study**
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- 4309 Justice decisions: brain integration of confidence in own judgment and other's opinion**
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- 4310 Brain activity and prosocial behavior in a simulated life-threatening situation**
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- 4311 The role of the medial prefrontal cortex in observing accidental and intentional behaviour**
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- 4312 Empathy for social exclusion involves the sensory component of pain: a within-subjects fMRI study**
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- 4313 Neural processing of negative social and non-social feedback stimuli in non-suicidal self-injury**
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- 4314 The neural basis of decision making in choosing a partner**
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- 4315 In your face: reactive aggression and orbitofrontal cortex reactivity to threat**
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- 4316 Hyperclassification reveals shared representation of action execution & observation across 2 brains**
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- 4317 Predictive representation of others' actions in a synchronous joint task: An EEG study**
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- 4318 Social anxiety modulates gaze behavior and mentalizing during social situations**
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- 4319 Inter-brain coherence patterns predict different human relationships**
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- 4320 Testosterone and decision strategy modulate orbitofrontal processing of parochial altruism**
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- 4321 Gender Differences in Automatic Motor Responses to Infant Cries**
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- 4322 Neural Mechanisms of Trust and Dyadic Interaction in BPD Investigated in Hyperscanning**
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- 4323 Physiological and neural correlates to rejection in a competitive context**
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- 4324 Decoding the communication partner from ECoG during real-life social interaction**
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- 4325 Similar cognitive processing mechanisms for vocal and facial attractiveness**
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- 4326 Brain structural characteristics of psychopathic traits and antisocial behaviors**
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- 4327 Connectivity among “Theory of Mind” Regions reflects Social Inference Computations**
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- 4328 Evaluation of individual difference during watching the movie**
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Sandra Thijssen¹, Ank Ringoot², Andrea Wildeboer³, Marian Bakermans-Kranenburg³, Hanan El Marroun², Frank Verhulst², Henning Tiemeier², Marinus van IJzendoorn³, Tonya White²
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- 4330 The pathway of inter-individual synchronization during eye contact enhanced by joint attention**
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- 4331 How Do Premies Brains Recognise Mother’s Voice?**
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- 4332 Development of rSMG Function and its Coupling with DLPFC Explain Emotional Egocentricity in Children**
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- 4333 Neural correlates of alcohol-related aggression are modulated by provocation level**
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- 4334 Oxytocin Attenuates the Neural Response to Unreciprocated Cooperation**
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- 4335 The effects of oxytocin and testosterone on the amygdala during social approach-avoidance**
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- 4336 Investigating joint attention in a developmental sample with an interactive fMRI paradigm**
Eileen Oberwelland^{1,2}, Leonhard Schilbach³, Iva Barisic^{4,3}, Sarah Constance Krall^{2,1}, Kai Vogeley^{3,2}, Gereon Fink^{5,2}, Beate Herpertz-Dahlmann¹, Kerstin Konrad^{1,2}, Martin Schulte-Ruether^{1,2}
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- 4337 Theta Burst TMS to the right DLPFC Increases Prosocial Behavior in the Dictator Game**
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- 4338 Dual Logic and Dual Neural Basis for Reciprocal Social Interaction**
Ray Lee¹
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Louis-Alexandre Marcoux¹, Pierre-Emmanuel Michon¹, Sophie Lemelin², Julien Voisin¹, Etienne Vachon-Presseau¹, Philip Jackson¹
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- 4340 Neural substrates of trust and diminishing motivations of generosity**
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- 4342 Disrupted modularity and functional connectivity of human brain networks with aging**
Jie Song¹, Rasmus Birn¹, Timothy Meier¹, Melanie Boly¹, Veena Nair¹, Mary Meyerand¹, Vivek Prabhakaran¹
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- 4343 An fMRI investigation of emotion regulation in the prefrontal cortex of the ageing brain**
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- 4344 Vulnerability to induced-hypoxia is linked to white matter hyperintensities in healthy elderly**
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- 4345 Age-related decline in inter-hemispheric connectivity for complex bimanual finger movements**
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- 4346 Relating neuropsychological performance profiles to cognitive resting state networks in the elderly**
Silke Lux¹, Stefan Lenzen¹, Svenja Caspers¹, Kerstin Juetten¹, Christiane Jockwitz¹, Axel Schleicher¹, Thomas Mühleisen^{1,2,3}, Susanne Moebus⁴, Noreen Pundt⁴, Holger Schütz¹, Vincent Gras¹, Karl-Heinz Jöckel⁴, Raimund Erbel⁵, Ulrich Mödder¹, Sven Cichon^{1,2,6}, Andreas Bauer^{1,7}, Dieter Sturma^{1,8}, Nadim Shah^{1,9,10}, Karl Zilles^{1,10,11}, Katrin Amunts^{1,10,12}
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- 4347 Age-Related White Matter Hyperintensities Relate to Speed in Virtual Street Crossing**
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- 4348 Cortisol is associated with thinner cortical gray matter in 512 elderly ADNI participants**
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- 4349 Initial consolidation in older adults depends upon competition between resting-state networks**
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- 4350 Neural processing of Location-based Negative Priming in older Adults**
Eva Bauer¹, Bernd Gallhofer¹, Gebhard Sammer¹
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- 4352 Age differences in resting state functional connectivity following item and associative encoding**
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- 4353 Disrupted connectivity between the salience network and central executive network in ageing**
Nia Goulden¹, Arun Bokde², Jonathan McNulty³, Paul Mullins¹
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- 4354 Functional connectivity efficiency of resting-state and task fMRI networks in the young and elderly**
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- 4355 Age-related changes of the mesolimbic system affect performance in reward-learning**
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- 4356 Age-related changes in frontal neural circuits during spatial working memory retrieval**
Max Toepper¹, Hans Markowitsch², Helge Gebhardt³, Thomas Beblo⁴, Eva Bauer⁵, Friedrich Wörmann⁶, Martin Driessen⁷, Gebhard Sammer⁸
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- 4357 Common neural activations of action observation, execution, and imagination in elderly**
Kerstin Juetten¹, Silke Lux¹, Svenja Caspers¹, Christiane Jockwitz¹, Stefan Lenzen¹, Thomas Muehleisen^{1,2,3}, Susanne Moebus⁴, Noreen Pundt⁴, Holger Schütz⁵, Vincent Gras⁶, Karl-Heinz Jöckel⁴, Raimund Erbel⁷, Ulrich Mödder¹, Sven Cichon^{1,8,2,3}, Andreas Bauer^{9,10}, Dieter Sturma^{5,11}, Nadim Shah^{6,12,13}, Karl Zilles^{1,13,14}, Katrin Amunts^{1,15}
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- 4358 Gyrfication changes in Default Mode Network as correlate of its functional reorganization with age**
Christiane Jockwitz¹, Svenja Caspers¹, Silke Lux¹, Kerstin Jütten¹, Stefan Lenzen¹, Susanne Moebus², Thomas Muehleisen^{1,3,4}, Noreen Pundt², Holger Schütz⁵, Vincent Gras⁶, Karl-Heinz Jöckel², Raimund Erbel⁷, Ulrich Mödder¹, Sven Cichon^{1,8,3,4}, Andreas Bauer^{9,10}, Dieter Sturma^{5,11}, Nadim Shah^{6,12,13}, Katrin Amunts^{1,14}, Karl Zilles^{1,13,15}
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- 4359 The association between anterior cingulate cortex functional connectivity and cognition in older age**
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- 4360 A selective ageing effect on the frontal lobe connections**
Katrine Rojkova¹, Emmanuelle Volle², Marika Urbanski¹, Frederic Humbert³, Flavio Dell'Acqua⁴, Michel Thiebaut de Schotten¹
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- 4361 Age dependency of structural covariance networks in middle-aged to older adults**
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- 4362 A longitudinal study of human brain complexity and cognitive decline in ageing**
Anca-Larisa Sandu¹, Roger Staff², Chris McNeil¹, Trevor Ahearn³, Lawrence Whalley¹, Alison Murray¹
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- 4363 The effect of a one-year aerobic exercise intervention on putamen volume**
Andrea Weinstein¹, Patrick Whitmoyer¹, Michelle Voss², Ruchika Prakash³, Amanda Szabo⁴, Siobhan Phillips⁵, Thomas Wojcicki⁶, Erin Olson⁶, Neha Gothe⁷, Edward McAuley⁶, Arthur Kramer⁸, Kirk Erickson¹
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- 4364 White Matter Aging in Schizophrenia: Perfusion vs. Integrity**
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- 4365 Age-related network re-organization during phonemic Verbal Fluency task**
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- 4366 White matter pathways associated with verbal memory in healthy aging: A TBSS study**
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- 4367 Longitudinal change in grey/white matter contrast is associated with cortical thinning over 8 years**
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- 4368 Less wiring, more firing: Age-related compensation for reduced white matter integrity**
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- 4369 The impact of Gray-Matter Volume Loss on Neuropsychological Performance of Healthy Older Adults**
Eva Bauer¹, Max Toepper², Bernd Gallhofer¹, Gebhard Sammer¹
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- 4370 Reduced slow wave sleep tied to capacity decline in visual short-term memory in older adults**
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- 4371 Training-induced fitness changes correlate with changes in neural distinctiveness in old age**
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- 4372 Hitchcock probes changes in cortical auditory processing through the lifespan**
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- 4373 Serum BDNF is correlated with connectivity in the sensorimotor hub in the aging human brain**
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- 4374 Changes in functional connectivity over the life span**
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- 4375 Gaussian Process-based model for individual rates of local atrophy in normal aging and dementia**
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- 4376 White matter microstructure and neural function during aging**
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- 4377 Grey matter cerebral blood volume correlates with fitness and working memory**
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- 4378 Cortical mechanisms related to understanding speech-in-noise in older adults**
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- 4379 PLS Spectral Analysis Reveals Time of Day Changes in BOLD Signal in Older Adult Resting & Task fMRI**
John Anderson¹, Nathan Churchill², Karen Campbell³, Lynn Hasher¹, Stephen Strother², Cheryl Grady²
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- 4381 Functional plasticity in young and older adults due to learning a new bimanual coordination task**
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- 4383 Normal hippocampal atrophy across the adult lifespan: A systematic review of longitudinal studies**
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- 4384 Impact of aging on fronto-striatal reward processing**
Matthijs Vink¹, Iris Kleerekooper¹, René Kahn¹
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Karen Campbell¹, Meredith Shafto¹, Paul Wright¹, Kamen Tsvetanov¹, Rhodri Cusack², Cam-CAN¹, Lorraine Tyler¹
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- 4386 Functional correlates of visual working memory in the elderly. A 7T study**
Bernhard Müller¹, Christian Kärger², Ina Christin Schäfer³, Stefan Maderwald⁴, Lena Schäfer⁵, Holger Siemann⁶, David Norris⁷, Jens Wiltfang⁸, Indira Tendolkar⁹
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- 4387 Developmental change in proactive interference from younger to older adult age: An fMRI study**
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- 4388 Functional interactions of large-scale networks explain age-related differences in visual memory**
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- 4389 Similar oscillation patterns in young and older adults during processing temporally modulated speech**
Katharina Rufener¹, Franziskus Liem¹, Volker Dellwo¹, Martin Meyer¹
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Marine Manard¹, Mohamed Ali Bahri¹, Eric Salmon¹, Fabienne Collette¹
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- 4392 Group analysis of functional data statistics with application to normal ageing brain by rs-fMRI**
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- 4393 Integrity of cerebral white matter and working memory in older adults**
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Myriam Sander¹, Yana Fandakova¹, Thomas Grandy¹, Ulman Lindenberger¹, Yee Lee Shing¹, Markus Werkle-Bergner¹
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- 4395 Sexual dimorphism and heterochronicity of post-adolescent changes in brain structure in adulthood**
Paolo Brambilla¹, Benedicto Crespo-Facorro², Igor Nenadic³, Francesco Benedetti⁴, Christian Gaser⁵, Heinrich Sauer³, Roberto Roiz-Santiañez⁶, Radaelli Daniele⁷, Sarah Poletti⁸, Gianluca Rambaldelli⁹, Veronica Marinelli⁹, Marcella Bellani⁹, Vaibhav Diwadkar¹⁰
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- 4396 Differential Age-Related Decrease in Hippocampal Subfield Volume from Childhood to Late Adulthood**
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Theresa Köbe¹, Veronica Witte¹, Lucia Kerti¹, Agnes Flöel¹
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Elisa Scheller¹, Jessica Peter¹, Jacob Lahr¹, Lora Minkova², Lena Koesterling³, Christoph Kaller⁴, Stefan Kloeppel¹
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- 4400 Altered Network associated with Repetition Effects in Mild Cognitive Impairment Patients**
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- 4404 Differential effects of metabolic and motor fitness on brain volume**
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4410 Age-related bilateral decrease in cortical thickness impacts on verbal and non-verbal working memory

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4412 Age-related changes on structural brain network in healthy adults

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Ophthalmology, National University of Singapore,
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Hikaru Takeuchi¹, Benjamin Thyreau¹, Yuko Sassa¹,
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4415 Resting-state FMRI in 6-to-10 year-old children: The Generation R Study

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- 4418 Impact of Puberty on the Evolution of Cerebral Perfusion During Adolescence**
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- 4419 Age and sex effects on adolescent performance of varying task difficulty on an fMRI Go/No-go task**
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- 4420 Surface Smoothing: A Way Back into Early Cortical Folding Process**
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- 4421 Heterogeneous developmental trajectories of fetal functional brain connectivity**
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- 4422 White Matter Asymmetry in Early Childhood: A Longitudinal Study**
Jonathan O'Muircheartaigh¹, Douglas Dean², Lindsay Walker², Ellen Doernberg², Jonathan Lee², Nicole Waskiewicz², Holly Dirks², Sean Deoni²
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- 4423 Brain microstructural correlates of cognitive control of emotional face stimuli in adolescents**
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- 4428 Automatic analysis of cerebellar growth trajectories in normal child development**
Vladimir Fonov¹, Katrin Weier¹, Berengere Aubert-Broche¹, D. Louis Collins¹
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- 4429 A Multi-Level Analysis of Brain Networks Underlying Adolescent Cognitive Control**
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- 4430 Concurrent ASL and BOLD fMRI of a Working Memory Task Across Development**
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- 4432 Morphological and functional changes in the developing brain during childhood and adolescence**
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- 4433 Age-Related Changes in Myelin Content in Healthy Children**
Michael Gregory¹, Tuong-Vi Nguyen^{1,2}, Ranjani Prabhakaran¹, J. Kippenhan¹, Katherine Roe¹, Crystal White¹, Lisa Yankowitz¹, Shau-Ming Wei¹, Melanie Sottile¹, Nicholas Turner¹, Hillary Raab¹, Tiffany Nash¹, Deborah Boyle², Pedro Martinez², Peter Schmidt², Karen Berman¹
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- 4434 Cortical thickness differences associated with family income in adolescents**
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Ting Guo¹, Julie Winterburn², Jon Pipitone², Emma Duerden¹, Vann Chau¹, Ken Poskitt³, Ruth Grunau³, Anne Synnes³, Steven Miller¹, Mallar Chakravarty²
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- 4436 Infants' brain responses at 14 months to known vs. novel words: An MEG study**
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Marta Re¹, Barbara Tomasino², Carolina Bonivento², Maria Nobile³, Valentina Bianchi³, Monica Bellina³, Filippo Arrigoni³, Marco Garzitto², Livia Fornasari⁴, Sara Piccin⁵, Franco Fabbro^{5,2}, Matteo Balestrieri⁴, Massimo Molteni³, Paolo Brambilla^{2,4}
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- 4438 Younger brains are more plastic: Environmental enrichment affects young mice differently than old**
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- 4440 Age Mapping the Developing Brain**
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- 4441 Music processing in newborns assessed by fMRI**
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Sarael Alcauter¹, Weili Lin¹, Keith Smith¹, John Gilmore¹, Wei Gao¹
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Hilary Toulmin¹, Christian Beckmann², Phumza Nongena³, Serena Counsell¹, Ashraf Ederies³, Tomoki Arichi¹, Nora Tusor¹, A. David Edwards¹
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- 4444 The Development of Hub Organization in the Human Functional Brain Network**
Louise Barué¹, William Baaré¹, Oscar Miranda-Dominguez², Eric Earl², Paul Cary², Kathrine Skak Madsen¹, Samuel Carpenter², Brian Mills², Elizabeth Hawkey², Julia Painter², Joel Nigg³, Damien Fair²
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- 4445 Voice perception in premature and full-term newborns using high-density EEG and fMRI**
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- A'arabi, Mohammad Hadi - **3589 WTh**
Aarnoutse, Erik - 4037 WTh
Aarts, Henk - 4246 WTh
Aasta, Helda - 1987 MT
Abbas, Zaheer - 2230 MT
Abbasi, Omid - 2243 MT
Abbott, Christopher - 1189 MT
Abbott, David - 1172 MT, 1712 MT, 1860 MT, **3112 WTh**,
3133 WTh, 3158 WTh, 3336 WTh, 3690 WTh
Abdel Rahman, Rasha - 1493 MT
Abdelgabar, Abdelrahman - 4306 WTh
Abdelnour, Farras - 1076 MT, 3839 WTh,
3840 WTh, 3856 WTh
Abdulkadir, Ahmed - 1112 MT
Abdulla, Susanne - 3223 WTh
Abe, Osamu - 2125 MT
Abe, Saori - **4330 WTh**
Abela, Eugenio - 3142 WTh, **3339 WTh, 3344 WTh**
Abernethy, Bruce - 3765 WTh
Abler, Birgit - **1292 MT**, 1970 MT, 2083 MT,
4229 WTh, 4313 WTh
Abolmaali, Nasreddin - 2252 MT
Abraham, Alexandre - 1840 MT
Abraham, Kristy - **3233 WTh**
Abrahamczik, Markus - **4094 WTh**, 4126 WTh
Abreu, Rodolfo - **2169 MT**, 3157 WTh
Abualait, Turki - **2008 MT**
Acedo, Victoria - 2325 MT
Achard, Sophie - 1744 MT, 1772 MT
Achermand, Peter - 4206 WTh
Achilleos, Achilleas - 1670 MT
Ackermann, Hermann - 3722 WTh
Ackley, Elena - 1846 MT, 1849 MT
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 Beck-Pancer, Devora - 3100 WTh
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 Bekrater-Bodmann, Robin - 3942 WTh

- Belay, Luam - 3538 WTh
 Belden, Andy - 1370 MT
 Belin, Pascal - 1894 MT, 3717 WTh, 4040 WTh, 4325 WTh
 Belio, Omar - 2119 MT
 Belke, Marcus - **1996 MT**
 Bell, Martha - 1574 MT
 Bell, Peter - **2020 MT, 3257 WTh**, 4049 WTh
 Bellander, Bo-Michael - 1272 MT
 Bellani, Marcella - 3455 WTh, 3804 WTh, 3824 WTh, 4395 WTh
 Bellebaum, Christian - 2399 MT
 Bellec, Pierre - 1721 MT, 3406 WTh, 4071 WTh
 Belleville, Sylvie - 4378 WTh
 Bellgowan, Patrick - 1273 MT, 1298 MT, 1310 MT, 1336 MT
 Bellgrove, Mark - 1147 MT
 Bellier, Ludovic - **4042 WTh**
 Bellina, Monica - 4437 WTh, 4452 WTh
 Belliveau, John - 1660 MT, 2009 MT, 4147 WTh
 Bellivier, F - 1632 MT
 Bellugi, Ursula - 3665 WTh
 Beltz, Adriene - **1034 MT, 1803 MT**, 1834 MT
 Ben Amitay, Shani - 2000 MT, **3564 WTh**, 3588 WTh
 Benali, Habib - 2418 MT, 3583 WTh
 Bénar, Christian - 1705 MT, 2233 MT
 Bénar, Christian G - 1809 MT
 Benavides-Varela, Silvia - **2299 MT**
 Bender, Andrew - **3915 WTh**, 4396 WTh
 Bender, Heidi - 3181 WTh
 Bender, Stephan - 1143 MT, **1679 MT**, 3047 WTh
 Benders, Andrea - 3785 WTh
 Bendfeldt, Kerstin - **1243 MT**, 3434 WTh
 Bendiremad, Nazhia - 2368 MT
 Bendlin, Barbara - **1074 MT**, 4376 WTh
 Bendszus, Martin - 3870 WTh
 Benecke, Reiner - 3268 WTh
 Benedek, Mathias - 2146 MT
 Benedetti, Francesco - 4395 WTh
 benetti, stefania - **1234 MT**
 benezit, audrey - 3878 WTh
 Bengtsson, Sara - 4237 WTh
 Benhajali, Yassine - 3406 WTh
 Benhamou, Marc - 3633 WTh
 Benis, Damien - 3005 WTh
 Benjamin, Christopher - 3152 WTh
 Benjamini, Yoav - 3600 WTh
 Bennett, Matthew - **4194 WTh**
 Benoit, James - 1500 MT
 Benson, Amy - 2374 MT
 Benson, Brenda - 1729 MT
 Benson, Sven - 1877 MT, 2079 MT, 4084 WTh, 4097 WTh
 Bente, Gary - 4287 WTh
 Benuzzi, Francesca - 3798 WTh
 Benuzzi, Francesca - **2342 MT**
 berde, charles - 3243 WTh
 Berenbaum, Sheri - 1034 MT
 Berendse, Henk - 2047 MT
 Berg, Anne - 1860 MT, 3158 WTh
 Berg, Patrick - 2180 MT
 Berg, Thomas - 2105 MT
 Bergamino, Maurizio - 3613 WTh
 Berger, Andreas - 3384 WTh
 Berger, Klaus - 1462 MT
 Bergmann, Jürgen - 4017 WTh, 4159 WTh
 Bergs, René - 4295 WTh, 4323 WTh
 Berman, Karen - 1922 MT, 3570 WTh, 3587 WTh, 4433 WTh
 Berman, Marc - 1756 MT
 Bermel, Robert - 3205 WTh, 3264 WTh, 3265 WTh
 Bernpohl, Felix - 1022 MT, 1345 MT
 Bermudez, Patrick - 1537 MT
 Berna, Chantal - 3618 WTh
 Bernard, Christophe - 1809 MT
 Bernard, Jessica - **1183 MT**
 Bernardi, Giulio - 3798 WTh
 Bernardino, Inês - **4193 WTh**
 Bernasconi, Andrea - 3116 WTh, 3141 WTh, 3145 WTh, 3826 WTh
 Bernasconi, Neda - 3116 WTh, 3141 WTh, 3145 WTh, 3826 WTh
 Berneiser, Julia - **1564 MT**
 Bernhardt, Boris - 3116 WTh, **3141 WTh, 3145 WTh**, 3826 WTh
 Bernhardt, Boris - 4281 WTh, 4289 WTh, 4332 WTh
 Bernick, Charles - 1276 MT
 Bernier, Michaël - 1714 MT, **3498 WTh**
 Bernstein, Matt - 1385 MT
 Berron, David - 2345 MT, **2452 MT**
 Berrou, Claude - 2178 MT
 Berry, Isabelle - 3225 WTh
 Berry, Jeffrey - 3762 WTh
 Berry, Kristen - 1734 MT
 Berthold-Losleben, Mark - 4151 WTh
 Berthoz, Alain - 3756 WTh
 Bertoldo, Alessandra - 3555 WTh
 Bertolino, Alessandro - 1067 MT, 1787 MT
 Bertrand, Olivier - 3529 WTh, 3956 WTh, 4042 WTh
 Bertsch, Katja - 3189 WTh
 Bérubé-Lauzière, Yves - 1684 MT, 3503 WTh
 Beschoner, Petra - 2431 MT
 Besle, Julien - 4019 WTh, 4020 WTh
 Besseling, René - 3120 WTh
 Besson, Pierre - **3121 WTh**
 Bestelmeyer, Patricia - 1894 MT, **4325 WTh**
 Betella, Alberto - 3544 WTh
 Better, Julian - 3738 WTh
 Betts, Jill - 1998 MT
 Betts, Matthew - **2145 MT**, 2345 MT
 Beucke, Jan - **3175 WTh, 3250 WTh**
 Beul, Sarah - 3821 WTh, **3843 WTh**
 Beume, Lena - 1562 MT, 3778 WTh
 Beyea, Steven - 1070 MT, 2207 MT, 2259 MT
 Beyer, Frederike - **4315 WTh**
 Bezgin, Gleb - 1756 MT, **3869 WTh**
 Bezzola, Ladina - 3849 WTh
 Bhaganagarapu, Kaushik - **1712 MT**
 Bhagwat, Nikhil - **3597 WTh**
 Bhatt, Ramesh - 3069 WTh
 Bhattacharyya, Pallab - 1133 MT, **1331 MT, 3205 WTh**, 3477 WTh
 Bhavsar, Saurabh - 3532 WTh
 Bhushan, Chitresh - 1859 MT, 3497 WTh
 Bhutta, Muhammad Raheel - 2275 MT, **2278 MT**, 2279 MT
 Bi, Yanchao - 3871 WTh

- Bianchi, Matteo - 3787 WTh
 Bianchi, Valentina - 4437 WTh, 4452 WTh
 Bianciardi, Marta - 1817 MT
 Biazoli Junior, Claudinei Eduardo - **3605 WTh**
 Bicchi, Antonio - 3787 WTh
 Bickel, Stephan - 1609 MT, **2267 MT**, 3012 WTh, 3013 WTh
 Bickerton, Wai-ling - 3327 WTh
 Bidet-Caulet, Aurélie - 4042 WTh
 Bidet-Ildei, Christel - 4269 WTh
 Bidula, Szymon - 2043 MT, 3938 WTh
 Bien, Siegfried - 2361 MT
 Bienkowska, Katarzyna - **2263 MT**
 Biermann-Ruben, Katja - 3680 WTh
 Biessmann, Felix - 3502 WTh
 Bihun, Emily - 3941 WTh
 Bijma, Fetsje - **1666 MT**
 Bijsterbosch, Janine - **3370 WTh**
 Bilder, Robert - 1250 MT
 Bilek, Edda - 3530 WTh, 4322 WTh
 Bileviciute-Ljungar, Indre - 3218 WTh
 Bilgiç, Başar - 1110 MT, 4216 WTh
 Bilodeau-Mercure, Mylène - 3733 WTh
 Binder, Elisabeth - 3373 WTh
 Binder, Jeffrey - 3689 WTh
 Bing, Liu - 1197 MT
 Binkofski, Ferdinand - 3277 WTh, 3802 WTh
 Binnewijzend, Maja - 3850 WTh
 Binney, Richard - 1126 MT
 Birbaumer, Niels - 3066 WTh, 4190 WTh
 Birn, Rasmus - 3106 WTh, 3131 WTh, 3496 WTh, 4342 WTh
 Bischof, Gerard - **1097 MT**
 Bishop, Daniel - 3765 WTh
 Bishop, Ronald - **3854 WTh**
 Bishop, Sonia - 3370 WTh
 Biswal, Bharat - 1043 MT, 1608 MT
 Biswal, Bharat - 1746 MT
 Bittner, Daniel - 3268 WTh
 Bittner, Robert - 2443 MT, **2454 MT**
 Bittner, Robert - 1239 MT
 Bitzer, Sebastian - **1392 MT**, 1416 MT, 3505 WTh
 Björkstrand, Johannes - 1819 MT
 Blackmon, Karen - 1734 MT
 Blackwell, Christopher - 3936 WTh
 Blader, Joseph - 1967 MT
 Blake, Randolph - 4181 WTh
 Blakemore, Rebekah - **3777 WTh**
 Blamire, Andrew - 4344 WTh
 Blangero, John - 1708 MT, 3370 WTh, 3400 WTh, 3401 WTh, 3404 WTh, 3406 WTh, 3408 WTh, 3412 WTh
 Blank, Helen - **3727 WTh**
 Blanke, Olaf - 2383 MT, 3754 WTh, 3865 WTh, 4009 WTh, 4240 WTh
 Blanken, Laura - 1453 MT, **3080 WTh**, 4415 WTh, 4416 WTh
 Blankenburg, Felix - 1232 MT, 1393 MT, 1731 MT, 2012 MT, 2426 MT, 3423 WTh, 3724 WTh, 4054 WTh
 Blankertz, Benjamin - 3465 WTh, 3502 WTh
 Blasi, Giuseppe - 1787 MT
 Blautzik, Janusch - 1002 MT, **1090 MT**, 3015 WTh
 Blautzik, Dr., Janusch - 2076 MT, 3030 WTh
 Blecker, Carlo - 3374 WTh
 Bledowski, Christoph - 2445 MT
 Blefari, Maria Laura - 3754 WTh, **4009 WTh**
 Blennow, Kaj - 1074 MT
 Bless, Josef - **3952 WTh**
 Bleuler, Hannes - 3754 WTh
 Blicher, Jakob - 3572 WTh
 Blin, Olivier - 2045 MT
 Block, Wolfgang - 1081 MT
 Blokland, Gabriella - 3385 WTh
 Blomeyer, Dorothea - 1458 MT, 1962 MT
 Blonder, Lee - 3396 WTh
 Bloomberg, Jacob - 3793 WTh
 Bludau, Sebastian - 1853 MT, **3810 WTh**, 3884 WTh, 3898 WTh
 Blüher, Matthias - 2395 MT
 Blumberger, Daniel - 3063 WTh
 Blume, Christine - 1521 MT, **4283 WTh**
 Blumensath, Thomas - 2013 MT
 Blumenthal, Jonathan - 3419 WTh
 Blumhardt, Jan - **1683 MT**
 Bluschke, Annet - 1143 MT
 Blythe, Duncan - **2181 MT**
 Bo, Hong - 1614 MT
 Boada, Fernando - 2136 MT
 Boardman, James - 1166 MT, 3463 WTh
 Boccardi, Marina - 3551 WTh
 Bocchetta, Martina - 3551 WTh
 Böcher, Lena - 1960 MT
 Bock, Elizabeth - 3635 WTh
 Bock, Nicholas - 3811 WTh
 Bockholt, H. - 3282 WTh, 3308 WTh, 3460 WTh
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 Böckler, Anne - **4261 WTh**
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 Bode, Stefan - 1471 MT
 Bodurka, Jerzy - 1298 MT, 1310 MT, 1314 MT, 1336 MT, 1594 MT, 1873 MT, 2031 MT, 2033 MT, 2052 MT, 2245 MT, 2262 MT
 Boe, Shaun - 1515 MT, 3854 WTh
 Boe, Shaun - 1517 MT, 2207 MT
 Boecker, Henning - 1063 MT, 1081 MT, 1140 MT, 1149 MT, 3203 WTh, 3558 WTh
 Boecker, Regina - 1458 MT, **1962 MT**, 2376 MT
 Boehringer, Andreas - 3028 WTh
 Boekel, Wouter - **3538 WTh**
 Boettiger, Charlotte - 1005 MT
 Bogart, Stephanie - 3878 WTh
 Bogerts, Bernhard - 4242 WTh
 Bogorodzki, Piotr - 1279 MT, 1287 MT
 Bohlhalter, Stephan - 1248 MT
 Böhme, Rebecca - 1412 MT
 Böhnlein, Joscha - 1188 MT
 Bohr, Iwo - **4344 WTh**
 Bohus, Martin - 3177 WTh
 Boileau, Isabelle - 3187 WTh
 boisgontier, jennifer - **3091 WTh**
 Boivin, Michel - 1874 MT

- Bokde, Arun - 1036 MT, 1080 MT, 1083 MT, **1084 MT**, 1103 MT, 1626 MT, 2102 MT, 2363 MT, 3372 WTh, 3387 WTh, 3392 WTh, 3403 WTh, 4353 WTh
- Bola, Michal - **4175 WTh**
- Boldt, Annika - 1431 MT
- Bolster, R. - 3107 WTh
- Bölte, Sven - 4292 WTh
- Bölts, Jan - 1263 MT
- Boltze, Johannes - 3643 WTh
- Boly, Melanie - 4342 WTh
- Boly, Melanie - **4000 WTh**
- Bommarito, Giulia - 1523 MT
- Bompas, Aline - 3529 WTh
- Bompas, Aline - **3805 WTh**, **4132 WTh**
- Bonath, Bjoern - 3983 WTh, **4061 WTh**
- Bonenberger, Martina - **4313 WTh**
- BONET, Bruno - 1559 MT
- Bongard, Joshua - 1626 MT
- Bonhage, Corinna - **3675 WTh**
- Bonilha, Leonardo - 3069 WTh
- Bonivento, Carolina - 4437 WTh, 4452 WTh
- Bonmassar, Giorgio - 4147 WTh
- Bonnet-Brilhault, Frédérique - 3088 WTh
- Bonzano, Laura - **3190 WTh**
- Boogerd, Willem - 3228 WTh
- Booij, Jan - 1317 MT
- Bookheimer, Susan - 1121 MT, 3100 WTh, 3152 WTh, 3416 WTh
- Boomsma, Dorret - 1605 MT, 3412 WTh, 4399 WTh
- Boon, Paul - 3120 WTh, 3137 WTh
- Boonzaier, Natalie - 3193 WTh
- Boop, Frederick - 3741 WTh
- Boord, Peter - 1826 MT
- Boorman, Erie - **1447 MT**
- Boos, Moritz - 1421 MT
- Booth, James - 2423 MT, 3445 WTh, 3706 WTh
- Borchardt, Viola - 1316 MT, **1343 MT**
- Bordier, Cécile - **3526 WTh**
- Boré, Arnaud - 2417 MT
- Borgwardt, Stefan - 1192 MT, 1243 MT
- Borhani, Reza - 3445 WTh
- Borich, Michael - 3333 WTh, 3350 WTh, 3792 WTh, 3818 WTh
- Bormann, Tobias - 3778 WTh
- Bornkessel-Schlesewsky, Ina - 3681 WTh, 3691 WTh
- Bornstein, Marc - 4299 WTh
- Borowiak, Kamila - 3078 WTh
- Borragán, Guillermo - **2416 MT**
- Borrell, Victor - 3560 WTh
- Borroni, Barbara - 1100 MT
- Borsook, David - 3243 WTh
- Borst, Grégoire - 1491 MT
- Bortel, Aleksandra - 1690 MT
- Bosch, Beatriz - 1593 MT
- Bosch, Rosa - 2118 MT
- Bosch-Bayard, Jorge - 4330 WTh
- Bosman, Conrado - 3972 WTh
- Bossaerts, Peter - 3426 WTh
- Bostan, Andreea - 1987 MT
- Bosworth, Rebecca - 4250 WTh
- Bottemanne, Laure - **4262 WTh**
- Bottenhorn, Katherine - **3905 WTh**
- Botteron, Kelly - 1370 MT
- Böttger, Joachim - 1513 MT, 3872 WTh, 3888 WTh
- Botvinik, Rotem - 2414 MT
- Boubela, Roland - 1333 MT, 2040 MT, **2046 MT**, 3387 WTh
- Boucard, Christine (Joyce) - 1895 MT
- Boucher, Olivier - **1882 MT**
- Boudreau, Mathieu - 2249 MT
- Bougerol, Thierry - 1322 MT, 3053 WTh
- Bougerol, Thierry - 3005 WTh
- Bouhali, Florence - **3817 WTh**
- Bouix, Sylvain - 3944 WTh
- Bourdillon, Pierre - 3566 WTh
- Bourgault, Patricia - 2167 MT
- Bourgeois, Jean-Pierre - 4227 WTh
- Bourgeron, Thomas - 3091 WTh, 3097 WTh, 3392 WTh, 4227 WTh
- Bourguignon, Mathieu - 2412 MT, 3768 WTh
- Bourguignon, Mathieu - **3770 WTh**
- Boutet de Monvel, Jacques - 4227 WTh
- Bouthillier, Alain - 1882 MT
- Bove, Marco - 3190 WTh
- Bowtell, Richard - 1704 MT, 1723 MT, 2039 MT, 2232 MT, 4019 WTh, 4020 WTh, 4220 WTh
- Boxer, Adam - 1123 MT
- Boy, Frederic - 1473 MT
- Boyaci, Huseyin - 3864 WTh, 3885 WTh, 3928 WTh, 3981 WTh
- Boyaci, Pinar - 3864 WTh, 3885 WTh, **3928 WTh**
- Boyd, Alicia - 1686 MT
- Boyd, Lara - 3333 WTh, 3350 WTh, 3351 WTh, 3792 WTh, 3818 WTh
- Boyd, Roslyn - **1172 MT**
- Boyd, Ryan - 1580 MT
- Boyle, Christina - **1127 MT**
- Boyle, Christina - 2239 WTh
- Boyle, Deborah - 1922 MT, 4433 WTh
- Boyle, Gerard - 2363 MT
- Boyle, Stephanie - 1405 MT
- Boysen, Ann-Christin - 2398 MT
- Bozzali, Marco - 1091 MT, 1917 MT
- Bracci, Stefania - **4145 WTh**
- Bracht, Tobias - **1320 MT**
- Braden, B. Blair - **1369 MT**
- Bradler, Sabine Helene - **3876 WTh**
- Bradley, Kailyn - **1162 MT**
- Brady, Sinead - **1998 MT**
- Brain, Susannah - 2269 MT
- Brakowski, Janis - 1330 MT
- Bramati, Ivanei - 1529 MT
- Brambilla, Paolo - 3455 WTh, 3804 WTh, 3824 WTh, **4395 WTh**, 4437 WTh
- Brambilla, Paolo - 4452 WTh
- Brammer, Michael - 3454 WTh
- Brandeis, Daniel - 1129 MT, 1458 MT, 1679 MT, 1962 MT, 2376 MT, 2442 MT, 3530 WTh
- Brandeis, Daniel - 2254 MT, 2411 MT, 4206 WTh
- Brandi, Marie-Luise - 1728 MT, **3775 WTh**
- Brandl-Rühle, Sabine - 4172 WTh
- Brandt, Alexander - 3220 WTh

- Brandt, Thomas - 4048 WTh
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 Brascamp, Jan - **4181 WTh**
 Brashers-Krug, Thomas - 3309 WTh
 Brashers-Krug, Tom - 3308 WTh
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 Brass, Marcel - 4311 WTh
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 Bratzke, Hans-Juergen - 2130 MT
 Brauer, Jens - 3643 WTh, 3651 WTh
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 Breakspear, Michael - 1289 MT, 1717 MT, **1848 MT**, 1908 MT, 2062 MT, 2114 MT, 3857 WTh
 Brechmann, Andre - 1930 MT, 4028 WTh, 4032 WTh
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 Breska, Assaf - **2196 MT**
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 Brichetto, Giampaolo - 1523 MT
 Brick, Timothy - 1893 MT
 Brickman, Adam - 2132 MT
 Bridwell, David - **1194 MT**, 1246 MT, 3451 WTh
 Brigadski, Tanja - 2107 MT
 Bright, Molly - **1596 MT**, **3851 WTh**
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 Brittain, Philip - 1142 MT
 Britz, Julianne - **1662 MT**
 Brocke, Burkhard - 1333 MT, 3384 WTh
 Brockhaus, Wolf-R. - 2375 MT
 Brod, Garvin - **2350 MT**
 Brodbeck, Christian - 1661 MT
 Brodersen, Kay H. - 1186 MT
 Brodie, Sonia - 3333 WTh, **3818 WTh**
 Brodmann, Katja - **1407 MT**
 Broehl, Henrike - 1914 MT
 Broersma, Marja - 3286 WTh
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 Bromberg, Uli - 1626 MT, 2102 MT, 3372 WTh
 Bronner, Shaw - 2401 MT
 Brookes, Matthew - 1245 MT, 2266 MT, 4223 WTh
 Brooks, Dana - 1692 MT, 3029 WTh, 3031 WTh, 3035 WTh, 3036 WTh, 3037 WTh, 3038 WTh
 Brooks, Teon - 1661 MT
 Brooks, Terrence - 1832 MT
 Broster, Lucas - **1106 MT**, **1440 MT**
 Broster, Lucas - 4400 WTh
 Brouwer, Rachel - 3412 WTh, **4399 WTh**
 Brown, Alyse - 2204 MT
 Brown, David - 3194 WTh
 Brown, Jesse - **1123 MT**
 Brown, Jesse - 3165 WTh
 Brown, Jesse - 2248 MT
 Brown, Jesse - 1088 MT
 Brown, Joshua - 1395 MT
 Brown, Kerry - 3613 WTh
 Brown, Mark - 1117 MT
 Brown, Matthew - **1500 MT**
 Brown, Peter - 3305 WTh
 Brown, Scott - 3538 WTh
 Brown, Vanessa - **1355 MT**
 Brožová, Hana - 3307 WTh
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 Brun, Lucile - **3573 WTh**, 3794 WTh
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 Bruno, Marie-Aurélien - 3999 WTh
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 Bryan, Angela - 1038 MT, 4447 WTh
 Brysbaert, Marc - 1615 MT, 3698 WTh, 3878 WTh
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 Buchanan, Laura - **1795 MT**, 1800 MT
 Büchel, Christian - 1036 MT, 1329 MT, 1413 MT, 1438 MT, 1626 MT, 2102 MT, 2176 MT, 3372 WTh, 3387 WTh, 3392 WTh, 3403 WTh, 4065 WTh, 4095 WTh, 4099 WTh, 4100 WTh, 4101 WTh, 4120 WTh, 4153 WTh
 Buchert, Ralph - 1412 MT, 1965 MT
 Buchheim, Anna - 1918 MT
 Buchholz, Verena - 3950 WTh
 Buchmann, Arlette - 1458 MT, 1962 MT
 Buckner, Randy - 3844 WTh
 Budde, Kristin - **1141 MT**
 Budisavljevic, Sanja - **1524 MT**

Buechler, Roman - **1257 MT**
 Buechner, Vanessa - 2076 MT
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 Bueler, Elliott - 1287 MT
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 Bunge, Silvia - 1463 MT, 2341 MT
 Bungert, Andreas - **3062 WTh**
 Bunk, Steffie - 1605 MT
 Bunzeck, Nico - 1932 MT, 1956 MT, 2326 MT, 3983 WTh, 4355 WTh
 Burdet, Etienne - 4450 WTh
 Burggren, Alison - **1109 MT**, 1121 MT
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 Burkart, Josh - 1381 MT
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 Burle, Boris - 3794 WTh
 Burmann, Inga - 2050 MT, 3411 WTh
 Burneo, Jorge - 1852 MT
 Burns, Gully - 3629 WTh
 Burrasch, Caroline - 1010 MT
 Burrows, Kaiping - 1966 MT
 Burton, Philip - 4031 WTh
 Burzynska, Agnieszka - 4347 WTh
 Busch, Barbara - 1140 MT, 3203 WTh
 Busch, Volker - 4102 WTh
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 Busse, Franziska - 2395 MT
 Bussone, Gennaro - 2030 MT
 Bustamante, Juan - 1000 MT, 1023 MT, 1041 MT, 1488 MT
 Bustillo, Juan - 1189 MT, 1245 MT
 Bustorf, Timm - 3057 WTh
 Butler, John - 2273 MT, 2308 MT
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 Butorina, Anna - 2202 MT, **3759 WTh**
 Butz, Marius - **1780 MT**, 1780 MT
 Büyükgök, Deniz - 2294 MT
 Buyukturkoglu, Korhan - 2073 MT
 Byrd, Richard - 3466 WTh, 3509 WTh
 Byrne, Patrick - 2024 MT
 Bzdok, Danilo - 1238 MT, 1299 MT, 1300 MT, 1975 MT, 4254 WTh, **4257 WTh**, 4293 WTh

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 Cabeen, Ryan - **1636 MT**
 Cabeza, Roberto - 4368 WTh
 Cabon, C - 1632 MT
 Cabral, Carlos - 1253 MT, 3462 WTh
 Cabrera, Alberto - 2143 MT, 4300 WTh
 Cacciaglia, Raffaele - **4041 WTh**
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 Cachia, Arnaud - **1491 MT**
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 Caeyenberghs, Karen - **1270 MT**, 3524 WTh
 Caffo, Brian - 1146 MT, 1476 MT, 3089 WTh, 3592 WTh
 Cafiero, Riccardo - 1647 MT
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 Cahalan, Christine - 4077 WTh
 Cahn, Wiepke - 1204 MT
 Cai, Chunyan - 1983 MT
 Cai, Huajian - 4234 WTh
 Cai, Qing - 3878 WTh
 Cai, Qing - **1615 MT**, 3698 WTh, 4446 WTh
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 Kim, Kyung Hwan - 1890 MT
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 Kim, Minkyung - 4007 WTh, **4008 WTh**, 4011 WTh
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 Oertel-Knöchel, Viola - 1239 MT, **1349 MT**, 1780 MT, 2443 MT, 2454 MT
 Oetken, Sarah - **4241 WTh**
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 Öge, A.Emre - 3059 WTh
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 Oh, Jennifer - 4376 WTh
 Oh, Jinook - 1548 MT, 1549 MT
 Oh, Maeng-Keun - 1850 MT
 Oh, Seung-Ha - 3211 WTh, 3230 WTh
 Ohgami, Yoshimi - 2172 MT, **2174 MT**
 Ohira, Hideki - 4256 WTh
 Ohla, Kathrin - 4056 WTh
 Ohn, Suk Hoon - 3289 WTh
 Ohrmann, Patricia - **1188 MT**, 1332 MT, 2211 MT
 Oitzl, Melly - 1304 MT
 Ojeda, Alejandro - 1538 MT
 Ojeda, Natalia - 2143 MT, 4300 WTh
 Oka, Noriyuki - **2284 MT**, 2285 MT, 2287 MT
 Oka, Takakazu - 4003 WTh
 Okada, Hiroyuki - 3668 WTh

Okada, Kayoko - **3665 WTh**
 Okada, Rieko - 1390 MT, **3700 WTh**
 Okamoto, Hiroshi - **4024 WTh**
 Okazawa, Hidehiko - 3068 WTh
 Okonkwo, David - 1286 MT
 Okonkwo, Ozioma - 1074 MT, 4376 WTh
 Okubo, Yoshiro - 3378 WTh
 Olausson, Håkan - 4125 WTh
 Oldehinkel, Marianne - **1153 MT**
 Olejarczyk, Elzbieta - 3539 WTh
 Oligschläger, Sabine - **1513 MT**
 Oliva, Aude - 4152 WTh
 Oliveira, Leticia - 3459 WTh
 Oliver Alvarez, Myriam - **3704 WTh**
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 Oliviero, Antonio - 3045 WTh
 Olm, Christopher - 3662 WTh
 Olman, Cheryl - 4031 WTh
 Olsen, Fraser - 1924 MT
 Olson, David - 2222 MT
 Olson, Erin - 4363 WTh
 Olsson, Gunnar - 3456 WTh
 Olvera, Rene - 3370 WTh, 3406 WTh, 3408 WTh, 3412 WTh
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 Ombao, Hernando - 3546 WTh
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 Onat, Selim - **1329 MT**
 Ong, How Hwee - 1388 MT
 Ong, Ju Lynn - 4154 WTh, 4199 WTh, **4200 WTh**
 Onitsuka, Toshiaki - 4024 WTh
 Oniz, Adile - 1256 MT
 Ono, Takashi - 3827 WTh
 Ono, Yumie - 2401 MT
 Onoe, Hirotaka - 2378 MT
 Onojima, Takayuki - **3712 WTh**
 Ontañón, Jose - 2143 MT, 4300 WTh
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 Ooi, Cinly - 1338 MT
 Oostenveld, Robert - 1676 MT, 2328 MT, 3960 WTh, 3972 WTh
 Oosterhof, Nikolaas - 3970 WTh
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 Opavský, Jaroslav - 4115 WTh
 Opel, Nils - 1309 MT, 3386 WTh
 Ophoff, Roel - 3580 WTh
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 Opitz, Bertram - **1963 MT**, 2349 MT
 Opmeer, Esther - 1224 MT, 1358 MT
 Opmeer, Esther - 1185 MT, 1321 MT
 Oranc, Cansu - 2365 MT
 Orban, Pierre - 1721 MT, 4071 WTh
 Orfanos, Stelios - 2036 MT, 4151 WTh
 Orgs, Guido - **4171 WTh**
 Oribe, Naoya - 4024 WTh
 Orihuela-Espina, Felipe - 2301 MT, 3772 WTh
 Orino, Yoshitomo - 2284 MT
 Ormel, J. - 1315 MT
 Orozco, Max - 4419 WTh
 Orr, Catherine - **1282 MT**, **1284 MT**
 Orr, Catherine - 1267 MT, 1278 MT
 Orr, Joseph - **3559 WTh**

Orth, Michael - 2157 MT, 3281 WTh
 Ortibus, Els - 1156 MT
 Ortiz-Garcia de la Foz, Victor - 1191 MT, 1199 MT
 Ose, Takayuki - 2378 MT
 Osharina, Victoria - 2306 MT
 Ossandon, Tomas - 2266 MT
 Osse, Robert Jan - 1056 MT
 Ossenblok, Pauly - 3137 WTh
 Ossmy, Ori - 3953 WTh
 Ostergaard, Leif - 3343 WTh
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 Osuch, Elizabeth - 1361 MT
 Oswal, Ashwini - **1674 MT**
 Otaki, Amane - 2285 MT
 Otruba, Pavel - 3317 WTh
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 Otto, Tobias - **1451 MT**
 Otto, Tobias - 4252 WTh
 Ou, Yangming - **3617 WTh**
 Ouchi, Yasuomi - **1054 MT**
 Ouimet, Tia - 3095 WTh
 Ourselin, Sebastian - 1986 MT
 Ovaska, Noora - 3957 WTh
 Owen, Adrian M - 4018 WTh
 Owens, Emmaly - 1551 MT
 Owji, Zahra - **1684 MT**
 Oxenham, Andrew - 4031 WTh
 Oya, Hiroyuki - 4039 WTh
 ÖZBAY, PINAR - **2056 MT**
 Özgör, Cansin - 2329 MT
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 Özyurt, Jale - **3240 WTh**, 4022 WTh
 O'Doherty, John - 3426 WTh
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 Pagliaro, Marina - 3996 WTh, 4025 WTh
 Pai, Ming-Chyi - 2457 MT
 Pail, Gerald - 1333 MT, 3384 WTh
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 Palva, Satu - 1558 MT, 1687 MT, 2428 MT, 2449 MT, 4130 WTh
 Pampel, André - 1925 MT, 2240 MT
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 Pan, Jinghua - 2034 MT
 Pandya, Sneha - 3249 WTh, **3533 WTh**
 Pang, Elizabeth - 1498 MT
 Pang, Zengchang - 3405 WTh, 3965 WTh
 Panizzon, Matthew - 3889 WTh
 Pankow, Anne - 1184 MT, 1206 MT
 Pantazis, Dimitrios - 1762 MT, 4152 WTh
 Pantel, Johannes - 1349 MT, 1780 MT
 Pantelis, Christos - 1198 MT, 4429 WTh
 Pantev, Christo - 1532 MT
 Paolini, Marco - 1002 MT, 1090 MT, 2076 MT, 3015 WTh
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 Papadelis, Christos - 1901 MT
 Papademetris, Xenophon - 1822 MT, 1841 MT, 3500 WTh
 PAPADOPOULOU, Theodore - 1689 MT, 1705 MT
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 Papazoglou, Sebastian - 3220 WTh
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 Parada, Francisco - 4264 WTh
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 Pardini, Matteo - 3190 WTh
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 Paret, Christian - **1869 MT**, **1888 MT**
 Parhizgar, Seyed Ehsan - **3016 WTh**
 Pariente, Jeremie - 1099 MT
 Pariyadath, Vani - **1949 MT**
 Parizel, Paul - 1732 MT
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 Park, Bumhee - 1627 MT, 1836 MT
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 Park, Denise - 1097 MT
 Park, Hae-Jeong - 1627 MT, 1836 MT, 1850 MT, 3474 WTh, 3693 WTh, 4197 WTh, 4328 WTh
 Park, Hi-Joon - 4091 WTh
 Park, Hyojin - 2366 MT, **3725 WTh**
 Park, HyunWook - 1889 MT
 Park, Jang-Yeon - 4116 WTh, 4122 WTh
 Park, Ji-Eun - 1053 MT
 Park, JunBum - 3039 WTh
 Park, Kyung-Soon - 2335 MT
 Park, Kyungmo - 2391 MT, 2393 MT, 4092 WTh

Park, Mi-Sook - 1008 MT, **1053 MT**
 Park, Min Tae - 1086 MT, **3285 WTh**, **3379 WTh**, 3597 WTh, 4447 WTh
 Park, Min-Tae - 1057 MT, 1098 MT, 1999 MT, 3187 WTh
 Park, Seong-yong - 1850 MT
 Park, Seongmin - **4309 WTh**
 Park, Soo-Young - **2432 MT**
 Park, Sung Jun - 3797 WTh
 Park, Young Ho - 3215 WTh
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 Parkes, Laura - 2374 MT
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 Parra, Lucas - 2166 MT
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 Pastötter, Bernhard - **2332 MT**, 2348 MT
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Pazderka, Hannah - 1500 MT
 Pearlson, Godfrey - 1194 MT, 1246 MT, 1760 MT
 Pearlson, Godfrey - 1189 MT, 1255 MT, 3451 WTh, 3947 WTh
 Pearlson, Godfrey - 1812 MT
 Peatfield, Nicholas Adam - **4176 WTh**
 Pech, Luisa-Maria - 3220 WTh
 Peck, Charles - 3456 WTh
 Pedale, Tiziana - 1900 MT
 Pedersen, Anya - 1188 MT, 2211 MT
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 Pelz, Patricia - **1044 MT**
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 Peña, Javier - 2143 MT, 4300 WTh
 Peña, Marcela - 3650 WTh
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 Pendl, Suzanne - 3689 WTh
 Peng, Shichun - 3298 WTh, **3507 WTh**
 Peng, Syu-Jyun - **3135 WTh**
 Peng, Xiaoling - 3841 WTh, 3853 WTh
 Peng, Ziwen - **3072 WTh**
 Penhune, Virginia - 2405 MT
 Penninx, Brenda - 1011 MT
 Penny, William - 2420 MT, 4375 WTh
 Pepe, Antonietta - 1089 MT, **1990 MT**
 Pepe, Lauren - 1948 MT
 Perales, Jose Cesar - 1017 MT
 Péran, Patrice - 1099 MT, 3225 WTh
 Perani, Suejen - 2109 MT, 3143 WTh, **3148 WTh**
 Peraza, Luis - **1092 MT**
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 Pereira, Mirtes - 3459 WTh
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 Peretz, Isabelle - 1537 MT, 4030 WTh, 4035 WTh
 Pérez Fernández, Alejandro - 3655 WTh
 Perez-Rodriguez, M. Mercedes - **1884 MT**
 Perfetti, Charles - 3687 WTh
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Perkmann, Thomas - 2057 MT, 3384 WTh, 3387 WTh
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 Pernet, Cyril - **1691 MT**, 1894 MT, 2195 MT, **4040 WTh**
 Perri, Roberta - 1091 MT
 Perron, Michel - 2370 MT, 4447 WTh
 Perrone-Bertolotti, Marcela - 2266 MT, 2368 MT
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 Perrot, Matthieu - 3565 WTh
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 Peterson, Bradley S. - 3397 WTh, 3743 WTh
 Peterson, Charles - 3400 WTh, 3412 WTh
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 Peysakhovich, Barbara - 1144 MT
 Pezawas, Lukas - 1333 MT, 2040 MT, 2057 MT, 3384 WTh, 3387 WTh
 Pfabigan, Daniela M. - 1606 MT, **1940 MT**, 2080 MT, 3484 WTh
 Pfannmöller, Jörg - 1881 MT, 1912 MT, **2044 MT**
 Pfeiffer, Ulrich - 1186 MT
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 Popov, Tzvetan - 2208 MT
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 Popovic, Ana - **2057 MT**
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 Prchkovska, Vesna - 2163 MT
 Preibisch, Christine - 1680 MT, 1788 MT, 2072 MT
 Preim, Bernhard - 3881 WTh
 Preissl, Hubert - 1937 MT, 1944 MT, 1946 MT, 3880 WTh
 Premi, Enrico - **1100 MT**
 Pressler, Ronit - 2109 MT, 2191 MT
 Presson, Nora - 1286 MT
 Preti, Maria Giulia - **1814 MT**, 4407 WTh
 Preuss, Nina - 3626 WTh
 Preusser, Sven - 1416 MT
 Price, Larry - 1734 MT
 Pringle, Abbie - **1325 MT**
 Prins, Doety - 3596 WTh
 Prior, Fred - 1686 MT, 1832 MT
 Pripfl, Juergen - **1032 MT**
 Proal, Erika - 1746 MT
 Proal, Erika - **2118 MT**
 Prochnow, Denise - **4251 WTh**
 Procissi, Daniel - 4103 WTh
 Proietti Cecchini, Alberto - 2030 MT
 Proix, Timothée - **3156 WTh**

Prokofyev, Andrey - **2202 MT**, 3759 WTh
 Prokopiou, Prokopis - **2068 MT**
 Protzner, Andrea - 3124 WTh
 Proudfit, Greg Hajcak - 1967 MT
 Provencher, David - **3503 WTh**
 Prudente, Cecilia - **3789 WTh**
 Prudlo, Johannes - 3268 WTh
 Prueckl, Robert - 2190 MT
 Pruessmann, Klaas - 2022 MT
 Pruessner, Jens - 1999 MT, 2016 MT, 3597 WTh, 4238 WTh
 Pruim, Raimon - **3491 WTh**, **3493 WTh**
 Pruksakaew, Kanchana - 1170 MT
 Prüssmann, Klaas - 2056 MT
 Prvulovic, David - 1349 MT, 1780 MT
 Prvulovic, David - 1239 MT
 Przewdzik, Izabela - 1599 MT
 Przybylski, Lukasz - **2043 MT**, 3938 WTh
 Ptito, Maurice - 3908 WTh
 Puce, Aina - 1907 MT, 3336 WTh, 4263 WTh, 4264 WTh
 Puckett, Alexander - **2062 MT**
 Pueyo, Roser - 1148 MT, 1490 MT, 1994 MT, 2096 MT
 Pui, Ching-Hon - 2351 MT, 3988 WTh
 Puig-Waldmueller, Estela - 1548 MT, 1549 MT
 Pulkki, Ville - 4026 WTh
 Pulvermüller, Friedemann - 3705 WTh, 3724 WTh
 Pundt, Noreen - 3363 WTh, 4346 WTh, 4357 WTh, 4358 WTh
 Purcell, Jeremy - 3321 WTh
 Purdon, Patrick - 3523 WTh
 Puschmann, Sebastian - 1930 MT, **4022 WTh**
 Pustelniak, Monika - 1530 MT
 Pustina, Dorian - 3125 WTh, 3128 WTh, **3129 WTh**, 3154 WTh, **3155 WTh**
 Puthanakit, Thanyawee - 1170 MT
 Puts, Nicolaas - 4119 WTh
 Pyasik, Maria - 2421 MT

Q

Qi, Rongfeng - 2021 MT
 Qian, Long - **2086 MT**, 3226 WTh
 Qian, Tianyi - 1614 MT, 3830 WTh
 Qiao, Jianping - 1048 MT, **3251 WTh**, **3397 WTh**, **3743 WTh**, 3895 WTh, 3909 WTh
 Qiao, Jianping - 1654 MT
 Qin, Jinhui - 1715 MT
 Qin, Qin - 2051 MT
 Qin, Shaozheng - **1556 MT**, 1563 MT
 Qin, Shuo - **2456 MT**
 Qin, Wei - 1971 MT, 1972 MT
 Qin, Wei - 2064 MT
 Qing, Zhao - **1711 MT**
 Qiu, Anqi - 4413 WTh
 Qiu, Jiang - 1984 MT
 Qiu, Shijun - 3161 WTh
 Quandt, Fanny - **3766 WTh**
 Quarto, Tiziana - 1787 MT
 Quevenco, Frances-Catherine - 1388 MT
 Quilichini, Pascale - 1809 MT
 Quinn, Kimberly - 4290 WTh

Quiñones, Ileana - 3652 WTh, 3655 WTh, 3677 WTh
Quinones, Ileana - **3709 WTh**

R

R Weinberger, Daniel - 1948 MT
Raab, Hillary - 1922 MT, 4433 WTh
Raamana, Pradeep Reddy - **3447 WTh**
Rabl, Ulrich - 1333 MT, 2057 MT, **3384 WTh**, 3387 WTh
Rabus, Anja - **1914 MT**, 3738 WTh
Rach, Stefan - 3021 WTh
Rachakonda, Srinivas - 3520 WTh
Rademacher, Lena - 1943 MT
Rademaker, Arthur - 1302 MT, 1324 MT
Rademakers, Rosa - 1088 MT
Radke, Sina - **4335 WTh**
Radua, Joaquim - 2118 MT, 3825 WTh, 4274 WTh
Radue, Ernst-Wilhelm - 1192 MT, 3434 WTh
Radue, Ernst-Wilhelm - 1243 MT
Rae, Charlotte - 2269 MT, 3256 WTh, **3273 WTh**
Raemaekers, Mathijs - 2077 MT, **4155 WTh**
Raethjen, Jan - 3294 WTh
Rafal, Robert - 3943 WTh
Raffin, Estelle - **2403 MT**
Ragni, Marco - 1546 MT, 1547 MT
Rahbar, Mohammad - 1983 MT
Rahm, Benjamin - 2300 MT, 4387 WTh
Rai, Harinder - **1182 MT**
Raichle, Marcus - 4226 WTh
Raine, Adrian - 3195 WTh
Raine, Adrian - 4326 WTh
Rainville, Pierre - 3922 WTh
Raison, Charles - 3833 WTh, 3896 WTh
Raitano Lee, Nancy - 3710 WTh
Raitano Lee, Nancy - 3419 WTh
Raj, Ashish - 1076 MT, 3249 WTh, 3325 WTh, 3533 WTh, **3839 WTh**, 3840 WTh, 3846 WTh, 3856 WTh, 3936 WTh
Raja Beharelle, Anjali - **1409 MT**
Rajagopal, Akila - 3641 WTh
Rajagopalan, Priya - 2239 WTh, 4348 WTh
Rajan, Usha - 1160 MT, 1161 MT
Rajendran, Vani - 1447 MT
Raji, Cyrus - 1127 MT
Ralaivola, Liva - 3435 WTh
Ramaekers, J - 1959 MT
Ramakrishnan, Nithya - 2456 MT
Raman, Sudhir - 4327 WTh
Ramantani, Georgia - 3115 WTh
Ramautar, Jennifer - 2240 MT
Rambaldelli, Gianluca - 3455 WTh, 3804 WTh, 3824 WTh, 4395 WTh
Rami-Mark, Christina - 2310 MT
Ramírez, David - 1663 MT
Ramnani, Narender - 2413 MT, 3920 WTh
Ramos-Cejudo, Juan - 1357 MT
Ramos-Quiroga, Josep Antoni - 2118 MT
Ramot, Michal - 4201 WTh
Rampino, Antonio - 1787 MT
Rampp, Stefan - 1676 MT, 2241 MT, 3109 WTh

Ramsden, Katie - 3750 WTh
Ramsey, Joseph - 1827 MT
Ramsey, Nick - 2077 MT, 2406 MT, 4037 WTh, 4155 WTh, 4166 WTh
rana, mohit - 2073 MT
Rance, Mariela - 3942 WTh
Ranck, Samantha - 3941 WTh
Ranft, Andreas - 1680 MT, 1788 MT
Rangarajan, Vinitha - 4222 WTh
Rangarajan, Vinitha - **3011 WTh**
Rangel, Antonio - 1439 MT
Raniga, Parnesh - 1847 MT
Ranjeva, Jean-Philippe - 2233 MT
Ranjeva, Jean-Philippe - 1744 MT
Rannou, Nicolas - 1652 MT, 3621 WTh
Rantell, Khadija - 3337 WTh
Rao, Ashish - 1586 MT, **1588 MT**
Rao, Hengyi - 4139 WTh
Rao, Isa - 4192 WTh
Rao, Stephen - 3262 WTh, 3264 WTh, 3265 WTh
Rao, Yi - 3362 WTh
Rapp, Alexander - 3810 WTh
Rapp, Michael - 1031 MT, 2375 MT
Rappoport, Maxwell - 1283 MT
Rascon, Fernando - 1415 MT
Rascovsky, Katya - 1087 MT
Rasgon, Alexander - 1366 MT
Rasmussen, Eileen - 2397 MT
Rastelli, Federica - 3349 WTh
Ratanadilok, Kattiya - 1170 MT
Rath, Jakob - 3293 WTh, 3296 WTh, **4128 WTh**
Ratheiser, Irisd - 3281 WTh
Rathi, Yogesh - 3944 WTh
Ratnanather, Tilak - 2138 MT
Ratnayake, Melanie - **1939 MT**
Rattay, Frank - 2385 MT
Rauchbauer, Birgit - **4297 WTh**
Rauchmann, Boris - 3015 WTh
Raufelder, Diana - 4247 WTh
Rauh, Jonas - 1229 MT
Rausch, Franziska - 1218 MT
Rawlings, Nancy - 1998 MT, 2217 MT, 4377 WTh
Ray, Kimberly - **1613 MT**, 3514 WTh, 3585 WTh
Ray, Kimberly - 1555 MT
Ray, Lara - 1052 MT
Ray, Suchismita - **1043 MT**
Raz, Amir - 2247 MT
Raz, Gal - 3216 WTh
Raz, Naftali - 3915 WTh, 4396 WTh
Razi, Adeel - 3263 WTh
Raznahan, Armin - 1454 MT, 3419 WTh, 3710 WTh
Razumnikova, Olga - 1399 MT
Re, Marta - **4437 WTh**, **4452 WTh**
Reader, Andrew - 3845 WTh
Real, Pablo - 3045 WTh
Reavis, Eric - 4167 WTh
Rebernik, Laura - **4097 WTh**
Rebola, Jose - 4193 WTh
Rebrikov, Denis - 3395 WTh
Reckfort, Julia - 3913 WTh, 3924 WTh

- Reddick, Wilburn - **2351 MT**
 Reddy, Navya - 3150 WTh
 Redlich, Ronny - **1309 MT**, 3386 WTh
 Redolar-Ripoll, Diego - **2455 MT**
 Redolfi, Alberto - 3582 WTh
 reed, michelle - 1695 MT
 Rees, Geraint - 3263 WTh, 3297 WTh
 Rees, Geraint - 3965 WTh
 Reeß, Tim - 3164 WTh
 Reese, Barbara - **1903 MT**
 Reese, Tanya - 1242 MT
 Reess, Tim - 3169 WTh
 Reetz, Kathrin - **2230 MT**, 3202 WTh, 3272 WTh, 3276 WTh
 Regenbogen, Christina - 1903 MT
 Regenthal, Ralf - 3256 WTh, 3273 WTh
 Rehme, Anne - 3345 WTh
 Rehme, Anne - **3330 WTh**
 Rehner, Astrid - 2454 MT
 Reichenbach, Alexandra - **3803 WTh**
 Reichenbach, Nadezda - 3015 WTh
 Reid, Agnieszka - **1155 MT**
 Reid, Andrew - **1802 MT**, 4425 WTh
 Reid, Meredith - 1251 MT, **2212 MT**
 Reid, Robert - 3495 WTh
 Reidler, Paul - **3210 WTh**
 Reif, Andreas - 1306 MT
 Reillo, Isabel - 3560 WTh, 3832 WTh
 Reilly, James - 4015 WTh
 Reilly, Karen - 2383 MT
 Reilly, Richard - 1205 MT
 Reilmann, Ralf - 3297 WTh
 Reimann, Katja - 3893 WTh
 Reimers, Luise - **4320 WTh**
 Reinders, A.A.T. Simone - 3191 WTh
 Reinelt, Janis - 3222 WTh
 Reinhard, Iris - 1029 MT
 Reinicke, Christine - **2191 MT**
 Reinisch, Veronika - 1090 MT
 Reinke, Britta - 1349 MT
 Reis, Aldina - 2372 MT
 Reis, Janine - 2415 MT
 Reischl, Eva - 2370 MT
 Reiser, Maximilian - 1090 MT, 2076 MT
 Reisert, Marco - 1562 MT, 3933 WTh
 Reishofer, Gernot - **2141 MT**, **2153 MT**, 2407 MT, 3740 WTh, 4208 WTh
 Reiss, Allan - 3418 WTh
 Reiss, Jeffrey - 1403 MT
 Reiter, Andrea - **1001 MT**, 1925 MT
 Reiterer, Susanne - 3740 WTh
 Rekittke, Linn-Marlen - 3532 WTh
 Rekkas, Paraskevi (Vivien) - 2050 MT
 Rektor, Ivan - 2244 MT
 Rektor, Ivan - **3144 WTh**
 Rektorova, Irena - 1727 MT
 Rektorová, Irena - 3278 WTh
 Relton, Caroline - 2370 MT
 Rémi, Jan - 3160 WTh
 Rémy, Chantal - 3566 WTh
 Ren, Juejing - **2023 MT**
 Renard, Felix - 1772 MT, **3346 WTh**
 Renauld, Emmanuelle - **3569 WTh**
 Reneman, L. - 1004 MT, 3228 WTh
 Renes, Robert - 4246 WTh
 Reneses Prieto, Blanca - 3006 WTh
 Renken, R.J. - 1315 MT
 Renken, Remco - 3596 WTh
 Renlai, Zhou - 1128 MT
 Renvall, Hanna - 3646 WTh
 Renvall, Ville - 2028 MT, **3586 WTh**
 Repple, Jonathan - 3369 WTh
 Repplinger, Stefan - 2358 MT
 Resch, Franz - 1679 MT
 Resnick, Susan - 1573 MT
 Ress, David - 3452 WTh, 4217 WTh
 Rettmann, Dan - 1980 MT
 Retzepis, Kallirroi - 3618 WTh
 Retzler, Chris - 1434 MT
 Reuter, Martin - 1117 MT, **1988 MT**, 1989 MT, 3627 WTh
 Reuter, Martin - 1389 MT, 1561 MT, 4231 WTh
 Reuter-Lorenz, Patricia - 1756 MT, 3793 WTh
 Revill, Kate - 3689 WTh
 Revillard, Jerome - 3582 WTh
 Revina, Yulia - **4192 WTh**
 Reyes-Aguilar, Azalea - **1916 MT**
 Reynolds, Nathaniel - 3617 WTh, 3618 WTh
 Reynolds, Rebecca - 1166 MT
 Rezaie, Roozbeh - 3741 WTh
 Reznik, Daniel - **3953 WTh**
 Rhee, Hak Young - 1066 MT
 Rhodes, Gillian - 3075 WTh
 Ribases, Marta - 2118 MT
 Ribeiro, Margarida - 2390 MT
 Ribeiro, Sidarta - 1514 MT
 Ricard, Matthieu - 4289 WTh
 Ricci, Claudia - 1091 MT
 Ricciardi, Emiliano - 2342 MT, 3787 WTh, 3798 WTh, 3908 WTh, 4059 WTh, 4272 WTh
 Rice, Grace - **3657 WTh**
 Rice, Justin - **2166 MT**
 Richards, David - 4154 WTh
 Richardson, Jennifer - 1554 MT, 1563 MT
 Richardson, Mark - 3148 WTh, 3159 WTh, 3906 WTh
 Richardson, Ulla - 2411 MT
 Richardson-Klavehn, Alan - 2327 MT, 2352 MT, 2358 MT
 Richarte, Vanesa - 2118 MT
 Richer, Louis - 2370 MT, 4447 WTh
 Richiardi, Jonas - 3242 WTh, 3472 WTh
 Richlan, Fabio - **3697 WTh**, 3701 WTh, 4274 WTh
 Richter, Anja - **1220 MT**, 1222 MT
 Richter, Anni - **3388 WTh**, 3389 WTh
 Richter, David - 3766 WTh
 Richter, Sylvia - 3388 WTh, 3389 WTh
 Rickmeyer, Constanze - 1239 MT
 Ridderinkhof, K. Richard - 1425 MT
 Riddle, Justin - 1455 MT
 Riddoch, Jane - 3341 WTh
 Rider, Robert - 3125 WTh, 3154 WTh
 Ridgway, Gerard - 3601 WTh, 4375 WTh
 Ridley, Ben - **1744 MT**

- Riecansky, Igor - 4094 WTh, 4285 WTh
 Riecher-Rössler, Anita - 1192 MT, 1243 MT
 Riedel, Michael - 1555 MT, 1613 MT, **3514 WTh, 3585 WTh**
 Riedel-Heller, Steffi - 4373 WTh
 Riedl, Valentin - 1055 MT, 1247 MT, 1299 MT, 1300 MT,
 1728 MT, 1788 MT, 1868 MT, 2072 MT, **2237 MT**, 2253 MT,
 2263 MT, 4170 WTh
 Rieger, Jochem - 3766 WTh
 Rieger, Sebastian - 1870 MT, 1921 MT, **2017 MT**, 3777 WTh
 Riek, Stephan - 1520 MT
 Riera Diaz, Jorge - 2198 MT, 2264 MT
 Rieß, Michael - 2092 MT
 Riese, Florian - 1057 MT, 1098 MT, 1101 MT
 Riese, H. - 1315 MT
 Rieskamp, Jörg - 1413 MT
 Rietschel, Marcella - 1036 MT, 1219 MT, 1226 MT, 1626 MT,
 1962 MT, 2102 MT, 3372 WTh, 3380 WTh, 3387 WTh,
 3392 WTh, 3403 WTh
 Rifà-Ros, Xavier - **1755 MT**
 Riggall, Adam - 4196 WTh
 Rigo, Paola - 4299 WTh
 Rigon, Jessica - 2377 MT
 Rigoulot, Simon - 1533 MT
 Rigoux, Lionel - **1776 MT**
 Rihs, Tonia - 4445 WTh
 Rijntjes, Michel - 3778 WTh
 Riley, Ed - 1134 MT, 1165 MT
 Riley, Jeffrey - 3352 WTh
 Rilling, James - 4334 WTh
 Rilo, Oihane - **2143 MT**
 RIMKUS, C - 3346 WTh
 Rimmele, Johanna - 2438 MT
 Rinck, Mike - 1022 MT
 Rincón Cortés, Millie - 1365 MT
 Ring, Susan - 2370 MT
 Ringman, John - 1075 MT
 Ringoot, Ank - 4329 WTh
 Rinker, Daniel - **3253 WTh**
 Rinne, Teemu - 1467 MT, 3957 WTh, 3959 WTh
 Ripke, Stephan - 1404 MT
 Ripollés Vidal, Pablo - 1755 MT, 1865 MT, 3110 WTh, **3654 WTh**
 Risen, Sarah - **1280 MT**
 Rish, Irina - 1757 MT
 Rish, Irina - 3456 WTh
 Ritschel, Franziska - 3188 WTh, 3221 WTh, 3231 WTh, **3239 WTh**
 Ritter, Jan - 1375 MT
 Ritter, Markus - 4174 WTh
 Ritter, Viktoria - 3229 WTh
 Ritter (geb. Hackmack), Kerstin - **3438 WTh**
 Rittman, Martyn - 3636 WTh
 Rittman, Timothy - **1072 MT, 3636 WTh**
 Rittman, Timothy - 2269 MT, 3256 WTh, 3273 WTh
 Rivière, Denis - 3560 WTh, 3565 WTh, 3832 WTh
 Riyahi Alam, Nader - 1823 MT
 Rizzo, Gaia - **3555 WTh**
 Rizzolatti, Giacomo - 3760 WTh
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 Roa Romero, Yadira - **2171 MT**, 4063 WTh
 Roalf, David - 4418 WTh
 Robbins, Trevor - 1006 MT, 1036 MT, 1201 MT, 1626 MT,
 2102 MT, 3171 WTh, 3256 WTh, 3273 WTh, 3372 WTh,
 3392 WTh
 roberto, toro - 3097 WTh
 Roberts, David - 4149 WTh
 Roberts, Gloria - **1289 MT**, 2114 MT
 Roberts, James - **3857 WTh**
 Roberts, Neil - 1166 MT, 3878 WTh
 Roberts, Neil - 3760 WTh
 Robertson, Frances - **2288 MT**
 Robin, Donald - 1967 MT, **3356 WTh**, 4109 WTh
 Robinson, Emma - 1718 MT, 1719 MT, 3402 WTh, 3890 WTh
 Robinson, Heather - 1510 MT
 Robinson, Jennifer - 1919 MT, 3905 WTh
 Robinson, Meghan - 1582 MT, 1800 MT
 Robinson, Peter - 1702 MT, 2062 MT
 Robinson, Peter - 1722 MT
 Robinson, Stephen - 1590 MT, **2205 MT**
 Robison, Leslie - 2351 MT
 Robustelli, Briana - 3076 WTh
 Roca, Pauline - 3565 WTh
 Roccatagliata, Luca - 3190 WTh
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 Roche, Alexis - 1274 MT
 Rockwood, Kenneth - 1070 MT
 Röder, Brigitte - 2438 MT, 3950 WTh
 Rodionov, Roman - 3140 WTh
 Rodrigue, Amanda - 1459 MT
 Rodrigue, Karen - 1097 MT
 Rodrigues, Abner - **1693 MT, 3547 WTh**
 Rodrigues, Erika - 2058 MT
 Rodrigues, João - **1808 MT**
 Rodriguez, Alfredo - 2119 MT, 2164 MT
 Rodriguez Buritica, Julia - **4448 WTh**
 Rodríguez Pujadas, Aina - 1488 MT
 Rodríguez-Chávez, Emmanuel - 3237 WTh
 Rodríguez-Fornells, Antoni - 1755 MT, 3110 WTh, 3654 WTh,
 3740 WTh, 4047 WTh, 4114 WTh
 Rodriguez-Herreros, Borja - 4114 WTh
 Rodriguez-Raecke, Rea - 1995 MT
 Roe, Katherine - 1922 MT, 4433 WTh
 Roebbig, Josefin - 1925 MT
 Roebroek, Alard - 1641 MT, 1650 MT, 1707 MT, 1839 MT, 2130 MT
 Roelofs, Karin - 4335 WTh
 Roenneberg, Till - 1090 MT
 Roesch, Julie - 2241 MT
 Roessner, Veit - 1150 MT, 3087 WTh, 3188 WTh, 3221 WTh,
 3231 WTh, 3239 WTh
 Roettgers, Hans - 2073 MT
 Rogalski, Emily - 1107 MT, 3935 WTh
 Rogalsky, Corianne - 3665 WTh
 Roger, Clemence - 3794 WTh
 Rogers, Christine - 3619 WTh
 Rogers, Robert - 3673 WTh
 Roggenhofer, Elisabeth - 2075 MT
 Rogowska, Jadwiga - **1279 MT, 1287 MT**
 Roh, Jee Hoon - 2250 MT
 Rohe, Tim - **4050 WTh**
 Rohenkohl, Gustavo - 3986 WTh

- Rohleder, Cathrin - 1015 MT
 Rohr, Christiane - 1925 MT
 Rohrer, Guido - **1788 MT**
 Roig Solvas, Biel - **1692 MT**
 Roiz-Santiañez, Roberto - **1191 MT**, 1199 MT, 4395 WTh
 Rojas, Gonzalo - **1838 MT**, **3873 WTh**
 Rojas Costa, Gonzalo - 1746 MT, 2118 MT
 Rojkova, Katrine - **4360 WTh**
 Rokem, Ariel - 1640 MT
 Rokers, Bas - 4180 WTh
 Roldan, Stephanie - 1574 MT
 Rolheiser, Tyler - 1924 MT
 Rolland, Benjamin - 1177 MT
 Rollings, David - 4203 WTh
 Román, Francisco - 3863 WTh
 Roman, Robert - 4285 WTh
 Romanczuk-Seiferth, Nina - 1219 MT, 1226 MT, 1345 MT
 Romani, Gian Luca - 2085 MT, 2203 MT, 3442 WTh, 3834 WTh
 Romano, Raffaella - 1787 MT
 Rombouts, Serge - 1304 MT, 1821 MT
 Rombouts, Serge A. - 4228 WTh, 4361 WTh
 Romero, Griselda - 2087 MT
 Romero-Romo, Juan - 3146 WTh
 Römisch, Manuel - 1941 MT
 Ron, Maria - 1986 MT
 Ronan, Lisa - 3821 WTh, **3822 WTh**
 Rondinoni, Carlo - **1073 MT**, 2229 MT, **3615 WTh**
 Roomet, Theresa - 3368 WTh
 Roopchansingh, Vinai - 1980 MT
 Roos, Annerine - **1026 MT**, 2288 MT
 Roosink, Meyke - 4088 WTh
 Roquet, Daniel - 4230 WTh
 Rorden, Chris - 3437 WTh
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 Ros, Beata - 1666 MT
 ROS, SILVIA - 3937 WTh
 Rosa, Maria - 3450 WTh, 3454 WTh, **3513 WTh**
 Rosch, Keri - 1154 MT
 Roschinski, Benjamin - 3231 WTh
 Rose, Emma - 1037 MT, 1205 MT
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 Rose, Michael - 2176 MT, **2322 MT**, 4105 WTh
 Rosell, Daniel - 1884 MT
 Rosell-Negre, Patricia - 1000 MT, 1023 MT, **1041 MT**, 1488 MT
 Rosen, Adon - 1574 MT
 Rosen, Bruce - 1271 MT
 Rosen, Dana - 1729 MT
 Rosen, Howard - 1088 MT, 1126 MT
 Rosenberg, Matthew - 3499 WTh, **4018 WTh**
 Rosenberg, Monica - 1822 MT
 Rosenberg-Lee, Miriam - 1554 MT, **1563 MT**
 Rosenblatt, Jonathan - **3600 WTh**
 Rosengarth, Katharina - 4172 WTh
 Rosenke, Mona - 1518 MT, 3755 WTh
 Rosenow, Felix - 1996 MT, 3151 WTh
 Rosenthal, Daniel - 2168 MT
 Röske, Sandra - 3261 WTh
 Rösler, Frank - 2361 MT
 Ross, Christopher - 2138 MT
 Ross, Judith - 3422 WTh
 Ross, Lars - 3713 WTh
 Ross, Paddy - **4303 WTh**
 Ross, Robert - 1003 MT
 Ross, Thomas - 1046 MT, 1949 MT, **3623 WTh**
 Rosser, Anne - 3288 WTh
 Rosser, Tena - 3416 WTh
 Rosset, Saharon - 3575 WTh
 Rossetti, Andrea - 3996 WTh, 4025 WTh
 Rossi, Alejandra - 4264 WTh
 Rossi, Cristina - 2056 MT
 Rossion, Bruno - 3000 WTh, 3867 WTh
 Roszkopf, Johannes - **2155 MT**, 2156 MT
 Rössler, Wulf - 1257 MT
 Rosso, Charlotte - **3316 WTh**
 Rostrup, Egill - 3971 WTh
 Roswandowitz, Claudia - **1139 MT**
 Roteneberg, David - **1655 MT**
 Roth, Christine - 2192 MT
 Roth, Cullen - **1246 MT**
 Roth, Muriel - 4439 WTh
 Rothermich, Kathrin - **4030 WTh**
 Rothkirch, Marcus - 1961 MT, **1964 MT**, 4178 WTh
 Rothstein, Pia - 3341 WTh
 Rotondaro, Francesca - 3961 WTh
 Rotshtein, Pia - 3327 WTh
 Rotshtein, Pia - 3979 WTh, 4290 WTh
 Rottschy, Claudia - 1452 MT, 1469 MT, 1745 MT, 3272 WTh, 3918 WTh, 4254 WTh
 Rotzer, Stephanie - 3014 WTh
 Rouhinen, Santeri - 2449 MT
 Rousseau, Celia - 1744 MT
 Rousseau, François - 3563 WTh
 Rousselet, Guillaume - 1894 MT
 Rousselet, Guillaume - 1691 MT, 2195 MT
 Roussotte, Florence - **1060 MT**, **1061 MT**, **3414 WTh**, **3415 WTh**
 Rovet, Joanne - 2389 MT
 rowe, james - 2269 MT
 Rowland, Laura - 2235 MT
 Rowley, Christopher - 3811 WTh
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 Roy, Abhrajeev - **2268 MT**
 Roy, Mandy - 1242 MT
 Royle, Natalie - 3932 WTh
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 Rubia, Katya - 2254 MT
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 Ruby, Florence - **2339 MT**
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 Rudrauf, David - 1642 MT
 Rueckert, Daniel - 1648 MT, 3488 WTh
 Rueschemeyer, Shirley-Ann - 1486 MT, 3669 WTh
 Ruf, Matthias - 1039 MT, 1869 MT, 1888 MT, 2376 MT, 2415 MT, 4322 WTh
 Rufener, Katharina - **4389 WTh**
 Rufer, Michael - 2010 MT

Ruff, Christian - 1409 MT, 1422 MT, 1423 MT, 1540 MT, 4273 WTh, 4296 WTh
 Ruff, Christian - 3033 WTh
 Ruge, Hannes - 1456 MT, 1485 MT, 3609 WTh
 Ruggeri, Mirella - 3455 WTh
 Ruhé, Eric - 1317 MT
 Ruhé, Henricus - 1321 MT
 Ruhnau, Philipp - **4173 WTh**
 Ruhrmann, Stephan - 1186 MT
 Ruigrok, Amber - 3081 WTh
 Ruigrok, Amber - **1981 MT**
 Ruiten, Dirk - 3875 WTh
 Ruiz, Mathieu - **4051 WTh**, 4163 WTh
 Ruiz, Sergio - 2073 MT
 Ruiz, Valeria - 2118 MT
 Rulseh, Aaron - **3307 WTh**
 Rumiat, Raffaella - 3771 WTh
 Ruparel, Kosha - 4418 WTh
 Rupert, Andy - 3641 WTh
 Rupprecht, Rainer - 1335 MT, 2007 MT
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 Takahashi, Haruka - 2409 MT, **4266 WTh**
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 Takahashi, Hideki - 2284 MT, 2287 MT
 Takahashi, Kei - 3667 WTh
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 Takahashi, Muneyoshi - 1390 MT, 3700 WTh
 Takahashi, Takayuki - 3042 WTh
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 Takeuchi, Hikaru - 1979 MT, 4414 WTh
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 Talja, Suvi - **3957 WTh**
 talmi, deborah - 2321 MT
 Tam, Friederike - 3087 WTh
 Tan, Ao - **4111 WTh**
 Tan, Ek Tsoon - 1588 MT, 3479 WTh
 Tan, Ek Tsoon - 1586 MT
 Tan, Haodan - 3528 WTh
 Tan, Shuwen - 1014 MT, 1016 MT
 Tanabe, Hiroki - 1957 MT, **3819 WTh**, 4256 WTh
 Tanaka, Ayuko - 4341 WTh
 Tanaka, Hirokazu - **3779 WTh**
 Tancredi, Felipe - 2270 MT
 Tancredi, Felipe - **4211 WTh**
 Tandi, Jesisca - 4199 WTh
 Tang, Chris Chengke - 3507 WTh
 Tang, Lingfei - **2362 MT**, 4396 WTh
 Tang, Rongxiang - **1266 MT**
 Tang, Xiaoying - 3101 WTh, 3244 WTh, **3248 WTh**
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 Tang, Yi-Yuan - 1266 MT, 3475 WTh
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 Taylor, John-Paul - 1092 MT
 Taylor, Kevin - 1981 MT
 Taylor, Margot - 1498 MT
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 Tenev, Aleksandar - **2163 MT**
 Tennekoon, Michael - **2423 MT**
 Tenorio, Violeta - 1148 MT, 1490 MT
 Teo, Wei Peng - 3041 WTh
 Teodorescu, Roxana - **1523 MT**, 3181 WTh
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 Teplitzky, Ben - 3004 WTh
 Terada, Tatsuhiro - 1054 MT
 Terasawa, Yuri - **1898 MT**, 1909 MT, 4003 WTh
 Termenon, Maite - **1772 MT**, 3346 WTh
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 Théberge, Jean - 1361 MT
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 Thelin, Eric - 1272 MT
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 Thiel, Sabrina - **1416 MT**
 Thiele, Frank - **3558 WTh**
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 Thomas, Adam - 1998 MT, **4377 WTh**
 Thomas, Adam - 2217 MT
 Thomas, Kiran - **3545 WTh**
 Thomas, Pierre - 1177 MT
 Thomason, Moriah - 1926 MT, 2110 MT
 Thompson, Abigail - **3092 WTh**
 Thompson, Cynthia - 1107 MT
 Thompson, Hannah - 1486 MT
 Thompson, James - 1569 MT, 4276 WTh
 Thompson, Jessica - **3449 WTh**
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 Thyreau, Benjamin - 2081 MT, **3535 WTh**
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- Tian, Jie - 1971 MT, 1972 MT, 3290 WTh
 Tian, Jie - 2064 MT
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 Tickle, Hannah - **1432 MT**
 Tiemeier, Henning - 1301 MT, 1453 MT, 1604 MT, 3080 WTh, 4329 WTh, 4415 WTh, 4416 WTh
 Tierney, Tim - 2109 MT, **3489 WTh**
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 Tijms, Betty - 1779 MT, 2226 MT, **3850 WTh, 3852 WTh**
 Tillem, Scott - **1948 MT**
 Tillmann, Barbara - 1159 MT, 1537 MT
 Timmermann, Lars - 3267 WTh, 3287 WTh, 3300 WTh
 Timonen, Markku - 1343 MT
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 Tinnermann, Alexandra - 4053 WTh
 Tintera, Jaroslav - 1621 MT
 Tired, Brice - 3583 WTh
 Tisdall, Dylan - 2003 MT
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 Tissier, Cloélia - 1491 MT
 Tittgemeyer, Marc - 3394 WTh
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 Toba, Monica N. - **3349 WTh**
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 Tohka, Jussi - 1089 MT, 1581 MT, 1990 MT, 4060 WTh, **4259 WTh**
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 Tong, Yunjie - **1709 MT, 2026 MT**, 2055 MT
 Toni, Ivan - 1489 MT
 Tonin, Paolo - 3335 WTh
 Tonn, Jonas - **1961 MT**, 1964 MT
 Tononi, Giulio - 4000 WTh, 4196 WTh
 Topac, Yasemin - 3864 WTh, 3885 WTh, 3928 WTh
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 Tovar-Moll, Fernanda - 2058 MT
 Towlson, Emma - 1737 MT
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 Toygar, Timur - 2036 MT, 4151 WTh
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 Tozer, Dan - 1986 MT
 Tozzi, Leonardo - 1297 MT, **4059 WTh**
 Träber, Frank - 1081 MT
 Tracey, Irene - 4096 WTh
 Tracy, Joseph - 3125 WTh, 3128 WTh, 3129 WTh, 3154 WTh, 3155 WTh
 Tramèr, Martin - 1662 MT
 Trampel, Robert - **1978 MT, 3809 WTh**, 3902 WTh, 3920 WTh, 4067 WTh
 Tranchant, Pauline - 4030 WTh
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 Trapp, Bruce - 3264 WTh, 3265 WTh
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 Trautmann-Lengsfeld, Sina - 3021 WTh
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 Treutlein, Jens - 1962 MT
 Triantafyllou, Christina - 2059 MT
 Trinkä, Eugen - 4017 WTh
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 Tromp, Do - 1324 MT
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 Trost, Sarah - 1344 MT, **3373 WTh**
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 Trueman, Rebecca - 3288 WTh
 Trujillo, Andrew - 1088 MT, 1123 MT
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 Tryfon, Ana - 3095 WTh
 Tsai, Arthur C. - 2188 MT
 Tsai, Chin-Fu - 4124 WTh
 Tsai, Jang-Zern - 3135 WTh
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Tsai, Kevin - **4138 WTh**
 Tsai, P.J. - 3329 WTh
 Tsai, Pei-Jung - **4205 WTh**, 4209 WTh, 4210 WTh
 Tsai, Shang-Yueh - 1773 MT
 Tsai, Shih-Jen - 3371 WTh, 3398 WTh
 Tsai, Y. L. - 3329 WTh
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 Tseng, Wen-Yih Isaac - 4392 WTh
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 Tshibanda, Luaba - 4010 WTh
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 Tu, Liu - 2227 MT
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 Tuovinen, Noora - **3186 WTh**
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 Turner, Robert - 1978 MT, 1992 MT, 3809 WTh, 3881 WTh, 3888 WTh, 3893 WTh, 3897 WTh, 3902 WTh, 3920 WTh, 4067 WTh

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 Uno, Yutaka - **3338 WTh**
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 Uppenkamp, Stefan - 4022 WTh
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 van den Heuvel, Martijn - 1550 MT
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Van der Haegen, Lise - 1615 MT, **3698 WTh**, 3808 WTh,
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 Van Der Laan, Laura N. - **1391 MT**, 2029 MT
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Zwosta, Katharina - **1456 MT**



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