

## **LOC Symposium:**

### **Disorders of self-awareness and dissociative states**

**10:50-12:00**

**Room ABC**

#### **Organizer:**

*Christoph Michel*

University of Geneva, Geneva, Switzerland

#### **Speakers:**

##### **Neural Principles of Bodily Self-Consciousness**

*Olaf Blanke, Swiss Federal Institute of Technology Lausanne, Switzerland*

##### **Brain circuits implicated in conversion disorders and hypnosis**

*Patrik Vuilleumier, University of Geneva, Geneva, Switzerland*

##### **Neural correlates of consciousness in coma and related states**

*Melanie Boly, University of Wisconsin, Madison, Wisconsin, United States*

Questions about mechanisms underlying self-awareness and consciousness have fueled fascination and debates for centuries among both philosophers and scientists. Alterations in these processes also constitute a major cause of handicap in several common neurological and psychiatric diseases, associated with important personal suffering and social burden. These clinical conditions range from depersonalization and alien control delusions in schizophrenia, through to somatoform symptoms and functional non-organic deficits in hysterical conversion, as well as distortions of consciousness and personal identity subsequent brain damage or drugs. Brain mapping research in the last two decades has contributed to bring many new insights into these various phenomena. The symposium will illustrate three such conditions where neuroimaging has provided unprecedented opportunities to pinpoint neural substrates of impairments and dissociations in self-awareness. Olaf Blanke will talk about mechanisms integrating multisensory and interoceptive information to elaborate bodily representations of the self, whose disorganization by experimental manipulations or pathological conditions lead to striking phenomena such as out-of-body experience. Patrik Vuilleumier will describe brain circuits involved in motor or sensory deficits such as paralysis or anaesthesia that arise without organic neurological damage in patients with hysterical conversion, long associated to unconscious emotional stress factors in Freud's theory. Melanie Boly will discuss how changes in distributed network activity and connectivity are induced by drugs during anaesthesia and yield novel views on mechanisms of consciousness. Together, these presentations will showcase how neuroimaging findings may illuminate brain-mind relationships in new ways but also contribute to better understand neuropsychiatric disturbances that have hitherto remained poorly understood.