

Brain Mapping Center SEMINAR SERIES

Sponsored by the UCLA Brain Mapping Center Faculty

The focus of these talks is on advancing the use of brain mapping methods in neuroscience with an emphasis on contemporary issues of neuroplasticity, neurodevelopment, and biomarker development in neuropsychiatric disease.

Hosted By: Shantanu Joshi, PhD, Neurology, UCLA

Speak to me: 18 years of neuroimaging in disorders of consciousness -- what have we learned?



Martin Monti, PhD

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What does it mean to suffer from a disorder of consciousness? In the past 18 years, non-invasive neuroimaging technologies such as functional magnetic resonance imaging (fMRI) and electroencephalography (EEG) have revolutionized our understanding of Disorders of Consciousness (e.g., Vegetative State and Minimally Conscious State). In this presentation, I will take stock of almost 20 years of neuroimaging in patients with Disorders of Consciousness and highlight the revolutions that these techniques have brought in terms of our understanding of these conditions, including (i) the dispelling of the myth of the "apallic brain", (ii) the highlighting of the limitation of our standard clinical (i.e., behavior-mediated) approach to assessing the presence of consciousness, and (iii) the search for a neural fingerprint of consciousness and of the mechanisms that accompany loss and recovery of consciousness after severe brain injury. In addition, I will also highlight the many shortcomings and difficulties posed by the use of these techniques, such as low sensitivity to detecting consciousness and the difficulty in interpreting brain activations, as well as the many misunderstandings that have arisen as a consequence of finding signs of consciousness in patients clinically diagnosed as being in a Vegetative State.

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**Neuroscience Research Building (NRB 132)
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