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

"Connectomics, traumatic brain injury and brain aging"

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The integration of longitudinal brain structure analysis with neurointensive care strategies continues to be a substantial difficulty facing traumatic brain injury (TBI) researchers. For patient-tailored case analysis, it remains challenging to establish how lesion profile modulates longitudinal changes in cortical structure and connectivity, as well as how these changes lead to behavioral, cognitive and neural dysfunction as a function of patient age. Additionally, despite the clinical potential of morphometric and connectomic studies, few analytic tools are available for their study in TBI. In this presentation, the state-of-the-art in structural and connectomic neuroimaging for the study of TBI, will be reviewed. In addition, recently developed, patient-tailored approaches for mapping TBI-related brain atrophy, morphometry alterations and inter-regional connectivity will be presented. The ability of such techniques to quantify how injury modulates longitudinal changes in cortical shape, structure and circuitry will be highlighted, with a focus on how analysis can be tailored based on patient age. Quantitative approaches such as these can be used to assess and monitor the clinical condition and evolution of TBI victims, and can have substantial translational impact, especially when used in conjunction with measures of neuropsychological function.

April 6, 2017 11:00am - 12:00pm

Neuroscience Research Building (NRB 132)
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