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.

"Network neuroscience approaches for examining brain dynamics and flexible behaviors"

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Executive control processes and flexible behaviors rely on the integrity of, and dynamic interactions between, large-scale functional brain networks. The right insular cortex is a critical component of a salience/midcingulo-insular network that is thought to mediate interactions between brain networks involved in externally oriented (central executive/lateral frontoparietal network) and internally oriented (default mode/medial frontoparietal network) processes. How these brain systems reconfigure with development is a critical question for cognitive neuroscience, with implications for neurodevelopmental pathologies affecting brain connectivity. I will describe studies examining how brain network dynamics support flexible behaviors in typical and atypical development, presenting evidence suggesting a unique role for the dorsal anterior insular from studies of meta-analytic connectivity modeling, dynamic functional connectivity, and structural connectivity. These findings from adults, typically developing children, and children with autism suggest that structural and functional maturation of insular pathways is a critical component of the process by which human brain networks mature to support complex, flexible cognitive processes throughout the lifespan.

October 7, 2021 11:00am - 12:00pm PDT

https://uclahs.zoom.us/meeting/register/tJ0qceyopj0pGNNK3U_qbg_J7cKMI7V9P99H

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