

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

“High-resolution multimodal MRI investigations of human episodic memory”



Michael A Yassa, PhD

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Associate Dean of Diversity, Equity and Inclusion, School of Biological Sciences
Director, Center for the Neurobiology of Learning and Memory
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My laboratory is interested in how the brain learns and remembers information, and how learning and memory mechanisms are altered in aging and neuropsychiatric disease. The central questions in our research are: (1) What are the neural mechanisms that support learning and memory? (2) How are memory circuits and pathways altered in the course of aging, dementia, and neuropsychiatric disorders such as depression and anxiety? (3) How can we identify early preclinical biomarkers that can distinguish between normal and pathological neurocognitive changes so that we can better design diagnostic and therapeutic tools.

To address these questions, we develop and refine cognitive assessment tools that specifically target memory processes and computations, such as pattern separation. We also develop, optimize, and use a host of advanced brain measurement techniques including high-resolution structural, functional, and diffusion MRI, PET, EEG, and intracranial recordings (ECoG) in patients, to explore the brain's architecture at very fine levels of detail. We combine these approaches with more traditional psychophysics including measurements of galvanic skin response (skin conductance), heart rate variability, and eye tracking. We are also working with collaborators to develop novel platforms for cellular resolution functional imaging in awake, behaving animals using novel MRI tracers. Finally, we are actively developing and testing several pharmacological and nonpharmacological cognitive enhancement interventions in older adults at risk for dementia, including studies of physical exercise.

November 5, 2020 11:00am - 12:00pm PDT

https://uclahs.zoom.us/meeting/register/tJModu6vrDgsEt1nZ_hASZiil1plzXeBpYIV

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