Brain Mapping Center

SEMINAR SERIES

Sponsored by the Brain Mapping Medical Research Organization and Brain Mapping Support Foundation

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, Ph.D., Neurology, UCLA

"ADC-fMRI: a functional contrast complementary to BOLD"



Ileana Jelescu, Ph.D.

Assistant Professor of Radiology
Lausanne University Hospital, Switzerland

Functional MRI contrasts (be it BOLD, VASO or ASL) traditionally rely on the vascular response to neural activity - the so-called neurovascular coupling. While these fMRI contrasts come with several key advantages, their reliance on an indirect vascular response limits them in terms of spatial and temporal resolution, and of sensitivity to weakly vascularized areas such as white matter. ADC-fMRI, on the other hand, relies on transient microstructural deformations that accompany the transmission of action potentials - the so-called neuromorphological coupling. In this talk, we will present a brief history of diffusion fMRI, lessons learned to make ADC-fMRI immune to vascular confounds, and how this contrast can be used in a complementary way to BOLD.

Ileana Jelescu is an Assistant Professor of Radiology at the Lausanne University Hospital, in Switzerland. Her vision is to turn the MRI scanner into a quantitative in vivo microscope, able to map tissue microstructure and brain activity in humans using diffusion MRI. Her research spans theoretical biophysical modeling, experimental design and validation, and clinical translation.

March 5, 2026 11:00 am - 12:00 pm PST

This seminar is Zoom only
Zoom: https://ucla.in/46s44kE

For more information contact: Shantanu Joshi (s.joshi@g.ucla.edu)