



NEUROSCIENCE AND PHYSIOLOGY SEMINAR SERIES

SHIVAM KANT

PhD Candidate | Department of Biological Sciences | Purdue University

“Two-photon volumetric imaging reveals layer-specific l23 dynamics during sensory discrimination learning.”

Two-photon calcium imaging is widely used to record neuronal activity. Imaging preserves spatial information, allowing chronic tracking of the same neurons. This is especially valuable for understanding how learning reshapes circuit dynamics over time. However, most functional imaging studies are limited to single-plane recordings or sequentially sampled sub-volumes, even though cortical computations are inherently volumetric. These approaches often trade volumetric coverage for temporal resolution, which limits the interpretation of truly volumetric cortical activity. Here, we use volumetric Bessel beam two-photon calcium imaging to examine how spatiotemporal neuronal population activity in layer 2/3 of the mouse somatosensory cortex evolves as animals learn a sensory discrimination task.



HOSTED BY:
NEUROSCIENCE AND PHYSIOLOGY
(N&P)

LEARN MORE AT:
<https://www.bio.purdue.edu/calendar/index/html>

TUESDAY, APRIL 21st | 12:00 PM | LILY 1-117

