

Symposium 32

Connecting the Dots: illuminating the brain from connectivity to function
Molecular and circuit-level understanding of memory and memory-related disorders

August 26th (Tuesday), 10:35-12:30
 Rm.113-115, Songdo CONVENIA, Incheon, Korea

Registration KSBNS2025.org

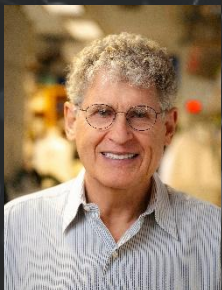
Organizer


Jinhyun Kim & Jong-Hyun Park

Korea Institute of Science and Technology

This session explores cutting-edge imaging technologies—such as super-resolution microscopy, large-scale connectomics, and advanced optical imaging—that are transforming our understanding of brain function by linking connectivity, cellular composition, and activity to behavior. Leading experts will present pioneering approaches for mapping brain-wide circuits, imaging synaptic and neurovascular dynamics, and manipulating neural activity to uncover the neural basis of perception and behavior.

Speakers


David Kleinfeld

University of California, San Diego, USA

"Energetics and competitive neural and vascular interactions shape blood-flow dynamics in cortex"

David Kleinfeld (UC San Diego) is a pioneer at the intersection of physics and neuroscience, renowned for revealing how the brain controls active sensing and regulates blood flow—offering deep insight into the brain's internal coordination.


Valentin Nägerl

Goettingen University, Germany

"Super-resolution shadow imaging of brain tissue in vivo"

Valentin Nägerl (University of Göttingen) leads the field of super-resolution brain imaging. His groundbreaking "shadow imaging" captures the brain's nanoscale architecture in action, unlocking new views of synaptic structure and plasticity.


Qingming Luo

Hainan University, China

"Visualizing brain-wide connectivity with fluorescence micro-optical sectioning tomography"

Qingming Luo (Hainan University) revolutionized brain mapping with fMOST, a powerful technique that visualizes brain-wide connectivity at single-neuron resolution—reshaping how we explore the structural logic of the brain.


Myunghwan Choi

Seoul National University, Korea

"Live imaging of neuroglia-like interaction in the taste bud"

Myunghwan Choi (Seoul National University) pushes the boundaries of live imaging in sensory systems. His innovative work visualizes dynamics in taste buds, revealing unexpected roles for glia-like cells in sensory processing.


Bernd Kuhn

Okinawa Institute of Science and Technology (OIST), Japan

"Imaging neuronal activity in the cerebellum with two-photon microscopy in behaving mice"

Bernd Kuhn (OIST) is redefining our view of the cerebellum through two-photon imaging in behaving animals, uncovering how fine-scale neural activity shapes learning and motor control in real time.