Understanding the (mouse) brain with neurophotonics
30 October 2020 · 8 AM to 2:00 PM Pacific time (US and Canada)

SPIE Neurophotonics Mini-Symposium features diverse, multidisciplinary panels for live talks and interactive discussions. The event is free of charge.

8:00 AM to 8:10 AM Welcome Address
Anna Devor (Boston University, SPIE Neurophotonics)

Each presentation will be followed by live Q & A.

Session I: From neuronal circuits to behavior
Presider: Andrea Hasenstaub (UC San Francisco)
8:10 AM to 8:30 AM Spencer Smith (UC Santa Barbara)
Cortical areas acting in concert during behavior
8:35 AM to 8:55 AM David Kleinfeld (UC San Diego)
Reinforcement learning links spontaneous dopamine transients to a reward
9:00 AM to 9:20 AM João Couto (Cold Spring Harbor)
Spatially segregated responses to visuo-tactile stimuli during active sensation
9:25 AM to 9:45 AM Ariel Gilad (Hebrew University of Jerusalem, Israel)
Mesoscale dynamics during learning and memory
9:50 AM to 10:05 AM Break

Session II: Astrocytes and microglia in neuronal circuits
Presider: Cam Tran (University of Nevada, Reno)
10:05 AM to 10:25 AM Xin Yu (MGH/HMS)
Mapping neuro-glio-vascular dynamics during the brain state fluctuation with simultaneous fMRI and fiber photometry
10:30 AM to 10:50 AM Matthew Holt (VIB-KU Leuven, Belgium)
Astrocytes integrate local sensory and brain-wide neuromodulatory signals
10:55 AM to 11:15 AM Li-Huei Tsai (MIT)
Robust glial response elicited by sensory gamma stimulation
11:20 AM to 11:40 AM Alba Peinado (UC San Francisco)
Optically decoding astrocyte calcium dynamics
11:45 AM to 12:00 AM Break

Session III: From neuronal circuits to hemodynamic signals
Presider: Michèle Desjardins (Université Laval, Canada)
12:00 PM to 12:20 PM Na Ji (UC Berkeley)
High throughput imaging of neurovasculature in vivo
12:25 PM to 12:45 PM Evelyn Lake (Yale)
Simultaneous optical imaging and fMRI - examining concert neural activity in the cortex and the whole brain BOLD signal
12:50 PM to 1:10 PM Andy Shih (Seattle Children’s)
Diminished pericyte plasticity in the aging brain causes prolonged disruptions to capillary flow
1:15 PM to 1:35 PM Ravi L. Runta (Université de Montréal, Canada)
Neurovascular coupling dynamics from the synapse to the pia
1:40 PM to 1:50 PM Concluding Remarks
Anna Devor (Boston University, SPIE Neurophotonics)

This event will be recorded and made available online.
Questions? Contact SPIEjournals@spie.org