Neurophotonics Mini-Symposium

At the intersection of optics and neuroscience

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.

Register ›

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 Desjardin**s (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 Rungta** (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*)

SPIE.

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

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