UC Berkeley Neuroscience

2018 ANNUAL CONFERENCE

October 5-6, 2018, Craneway Pavilion

FRIDAY, October 5

2:30–3:00 **Poster Setup & Registration**

3:00–3:05 **Welcome**

3:05–3:15 **Opening Remarks**

3:15–3:25 **Udi – Highlights**

3:25–3:40 **Michael Silver – PhD Program**

3:40–4:00 **Polina Kosillo (Bateup Lab)**

mTORC1 Critically Controls Dopamine Neuron Physiology and Function

4:00–4:20 **Maedbh King (Ivry Lab)**

Mapping the Functional Organization of the Human Cerebellum

4:20–4:50 **Markita Landry**

Imaging Dopamine Release with a Non-Genetically Encoded Near-infrared Nanosensor

4:50–5:00 BREAK

5:00–5:20 **Alexandre Tiriac (Feller Lab)**

Light Contributes to the Development of the Visual System Before Eye-opening

5:20–5:40 **Ignas Cerniauskas (Lammel Lab)**

Circuit Architecture of Lateral Habenula Neurons Underlies a Distinctive Subtype of Depression

5:40–6:10 **Bruno Olshausen**

Sparse Coding, Manifold Flattening and Persistence as Organizing Principles of visual Representation

6:10–7:10 **Keynote Speaker, John Krakauer**

Motor Planning and Motor Learning in Health and Disease

7:10–8:10 DINNER

8:10–9:10 **Debate with Keynote Speaker**

9:10–10:00 **Poster Session**

SATURDAY, October 6

9:30–10:00 **Registration and Light Breakfast**

10:00–11:15 **Data Slam**

11:15–11:35 **Wei-chun Wang (Bunge Lab)**

Investigating Why Adults Get a Bigger Memory Boost from Semantic Congruency than Children

11:35–11:55 **Adam Hoagland (Isacoff Lab)**

Circuit-level Homeostasis in Response to Synaptic Perturbations

12:00–1:00 LUNCH

1:00–1:30 **Dan Feldman**

Sensory Codes for Touch in Whisker Somatosensory Cortex

1:30–1:50 **Greg Telian (Adesnik Lab)**

Primary Sensing in Motor Cortex

1:50–2:10 **Sam McDougle (Collins Lab)**

Parametric and Discrete Representations in Motor Learning

2:10–2:40 **Rich Kramer**

Exploiting Remodeling of the Retina to Improve or Restore Vision in Blinding Disease

2:40–3:00 BREAK

3:00–3:20 **Salil Bidaye (Scott Lab)**

Initiating a Six-legged walk: Central Neuronal Pathways for Walking Control in *Drosophila*

3:20–3:50 **Na Ji**

High-speed High-resolution Volumetric Imaging of the Brain

3:50–4:10 **Eric Knudsen (Wallis Lab)**

Orbitofrontal Cortex Synchronizes with Hippocampus to Enable Reward-based Learning

4:10–4:30 **Chris Habrian (Isacoff Lab)**

How Does a "Broken" GPCR Work?: "Fixing" a Key Pre-synaptic Receptor in Plasticity

4:30–5:00 **Bob Knight**

Electrophysiology of Human Cognition: Insights from HWNI Grad Students

5:00–6:00 **Faculty/Postdoc Meeting (free time)**

6:00–7:00 DINNER

7:00–8:00 Poster Session

8:00–12:00 DJ Party

POSTERS

Bateup Lab
John Blair
A Human Neuronal Model of Tuberous Sclerosis

Daniel Kramer
Using Intersectional Genetic Tools to Explore Discrete dopaminergic circuits and co-release

Bautista Lab
Rose Hill
The Signaling Lipid Sphingosine 1-Phosphate Regulates Mechanical Pain

Bunge Lab
Elena Galeano Weber
How Does Hemispheric Communication Shape Cognitive Development? Investigating Working Memory Precision in the Healthy and Impaired Brain.

D'Esposito Lab
Jacob Miller
Mapping the Functional Neuroanatomy of Prefrontal Cortex

Dillin Lab
Holly Gildea
Characterization of Organelle Stress in C. Elegans Tauopathy Models

Feldman Lab
Sanika Ganesh
Pharmacogenetic Inhibition of Neural Activity as a Method to Study Cortical Homeostasis

Feller Lab
Franklin Caval-Holme
Dopaminergic Modulation of Gap Junctions Shapes Encoding of Light in the Neonate Retina

Christiane Voufo
Dopamine Modulates Intrinsic Excitability of Light Sensitive Cells in the Developing Retina

Corey Webster
The Role of TrpM3 During Retinal Development

Isacoff Lab
Amy Winans
Sensing Light Through a Ciliary, Non-visual Opsin in the Developing Vertebrate Spinal Cord

Landry Lab
Ian McFarlane
Dual Near Infrared Two Photon Microscopy for 3D Imaging of Biological Systems

Liu Lab
Miriam Hernandez-Morales
FeRIC: A Magnetogenetic Technique to Study Brain with no Depth Limitation and with no Cytotoxic Effects

Miller Lab
Molly Kirk
Genetic Targeting of Synthetic Voltage Sensitive Dyes in the Awake, Behaving Fly

Ngai Lab
Rebecca Chance
Building Genetic Tools for Target-specific Subtypes of Cortical Projection Neurons

Saijo Lab
Eva Nichols
Microglial Inflammasome Regulates Normal Brain Development and Prevents ADHD-like Behavior

Kutresha Worden
The Role of *Pogz* in Epigenetic Regulation of Microglial Function

Laura Craciun
Exploring the Role of Astrocytes in Healthy and Diseased Brain Development

Schaffer Lab
Kira Mosher
Dissecting Cell Signaling Networks that Regulate Adult Neural Stem Cell Functions

Scott Lab
Philip Shiu
Two Screens for Neurons Sufficient for Drosophila Feeding Behavior

Stefanie Engert
Tracing of Drosophila Gustatory Neurons in a Whole Brain Electron Microscopy Dataset

Weiner Lab
Jesse Gomez
Human Visual Cortex is Organized Along Two Genetically Opposed Hierarchical Gradients with Unique Developmental and Evolutionary Origins

Wyrobek Lab
Andrew Wyrobek
CSF and CNS Tissue Pathways Associated with Stress-induced Anxiety and Neurodegeneration

Yartsev Lab
Tobias Schmid
Establishing the Behavioral, Anatomical, and Neurophysiological Foundations for Studying Vocal Learning in a Mammalian Model System