

# 2017 UC Berkeley Neuroscience Annual Conference

Granlibakken Conference Center  
October 13-15, 2017

FRIDAY, October 13

2:00 – 3:30 PM: Arrival and Registration

3:00 - 3:30 PM: Poster Set-Up in Bay Room

3:30 – 5:00 PM: Poster Session in Bay Room

Adesnik Lab

**Alan Mardinly**

“Precise Holographic Control of Neural Ensembles in Behaving Animals”

**Evan Lyall**

“Feature Tuning in the Barrel Cortex during Active Touch”

**Ben Shababo**

“High-Throughput, High-Resolution Neural Circuit Mapping”

**Alex Naka**

“Complementary Subnetworks of Cortical Somatostatin Interneurons”

Dillin Lab

**Holly Gildea**

“Glial Regulation of *C. elegans* Cellular Stress Responses”

Bateup Lab

**Polina Kosillo**

“mTORC1 Critically Controls Dopamine Neurons Physiology And Function”

**Vasiliki Karalis**

“*Rptor* Deletion Rescues TSC-Related Phenotypes in Mice”

**Daniel Kramer**

“Transgenic Approaches towards Studying Functional Sub-Populations of Dopamine Neurons”

Brohawn Lab

**David Kern**

"Structural Exploration of a Novel Cellular Gateway"

**Christopher Hoel**

"Molecular Investigation of Hearing and Balance"

**Robert Rietmeijer**

"Force Gating of a Eukaryotic Potassium Channel"

Feldman Lab

**Keven Laboy-Juarez**

"Elementary Principles of Multi-Whisker Integration in Barrel Cortex"

Kaufer Lab

**Kim Long**

"The Unusual Suspects: The Role of Oligodendrocytes in Sex-Dependent Susceptibility to Stress-Induced Anxiety"

D'Esposito Lab

**Jacob Miller**

"The Effects of Content-Dependent Competition on Working Memory Capacity"

Miller Lab

**Molly Kirk**

"Lactate Dehydrogenase Inhibition Mimics Ketone Body Metabolism in Primary Hippocampal Cultures"

Sommer Lab

**Chris Warner**

"Image Segmentation in Retina!?"

Isacoff Lab

**Amy Winans**

"Sensing Light through a Ciliary Non-Visual Opsin in the Developing Vertebrate Spinal Cord"

Carmena Lab

**Nuria Vendrell Llopis**

"Ventral Striatum Predicts Reward during Operant Neuroprosthetic Learning Task"

Knight Lab

**Arjen Stolk**

"Oxytocinergic Modulation of Human Adaptive Communication and Broadband Neuronal Dynamics"

**Colin Hoy**

"Conflict-Sensitive High Frequency Activity and Event-Related Potentials in Medial and Lateral Prefrontal Cortex during a Stroop Task"

**Nick Myers**

"Use-Dependent Coding for Working Memory"

Scott Lab

**Justine Chia**

"Mushroom Body Output Neurons Can Modify Activity in Taste Circuits"

Feller Lab

**Alexandre Tiriac**

"A Role for Visual Experience in Activity-Dependent Development Prior to Eye-Opening"

**Malak El-Quessny**

"A Role for Visual Experience in the Maturation of Direction Selectivity"

**Franklin Caval-Holme**

"Electrical Coupling between Ganglion Cell Photoreceptors Regulates the Light Sensitivity of the Developing Retina"

**Corey Webster**

"TrpM3 Mediated Calcium Transients in Muller Glia Modulate Retinal Ganglion Cell Activity"

**Joshua Tworig**

"Probing the Roles of Muller Glia in Retinal Synaptic Development"

**Ryan Morrie**

"Starburst Cell Morphology Aligns Synaptic Outputs with Subcellular Computations to Generate Direction Selectivity in the Retina"

Silver Lab

**Kelly Byrne**

"Individual Differences in Response to Cholinergic Enhancement"

Maharbiz Lab

**Konlin Shen**

"Neural Dust: Ultrasonic, Wireless, Implants for Neuromodulation"

DeWeese Lab

**Louis Kang**

"Self-Organization of Entorhinal Grid Modules through Commensurate Lattice Relationships"

Olshausen Lab

**Alex Anderson**

"High Acuity Vision in the Presence Of Fixational Eye Movements"

**Vasha Dutell**

“Population Heterogeneity in Efficient Encoding of Natural Visual Signals”

**Dylan Paiton**

“Understanding Recurrence and Feedback in Neural Network Models”

Olshausen & DeWeese, Redwood Center Lab

**Ryan Zarcone**

“Natural Image Storage with Noisy Analog Elements”

Ivry Lab

**Maedbh King**

“Comprehensive Mapping of Functional Organization in the Human Cerebellum”

Saijo Lab

**Eva Nichols**

“Microglial Pyroptosis is Required for Normal Neurodevelopment”

Theunissen Lab

**Bill Wood**

“Memories of Songs and a Sensorimotor Transformation”

Griffiths Lab

**Monica Gates**

“Modeling Political Correctness”

Bishop Lab

**Kaisu Lanskinen**

“Dynamics of Cortical Brain Activity during Movie Viewing”

Wyrobek Lab

**Andrew Wyrobek**

“Molecular Characterization of Choroid Plexus and Hippocampal Damage and Degenerative CNS Risks from Exposure to Space Radiation on flights to Mars”

**5:00 - 6:30 PM: 1<sup>st</sup> Session in Mountain-Lake Room**

5:00 – 5:05 – **Barbara Peterson**

Welcome

5:05 – 5:15 – **Michael Yartsev**

Opening Remarks

5:15 – 5:25 – **Ehud Isacoff**  
Berkeley Neuroscience Highlights  
5:25 – 5:40 – **Michael Silver**  
Spotlight on the PhD Program  
5:45 – 6:05 – **Daniela Kaufer**  
“Glial Plasticity and the Aging Brain”  
6:10 – 6:30 – **Katie Benthall** (Bateup Lab)  
“Altered Striatal Neuron Excitability Leads to Enhanced Motor Routine  
Learning in a Mouse Model of Autism”

**6:30 – 7:30 PM: Dinner in Granhall**

**7:35 - 10:00 PM: 2<sup>nd</sup> Session in Mountain-Lake Room**

7:35 – 8:35 – **Richard Mooney, Duke University**  
“From Song to Synapse: The Neurobiology of Vocal  
Communication”  
8:40 – 10:00 – **3rd Year Data Slam Part 1**

**10:00 PM – 2:00 AM: Social in Ski Hut**

**SATURDAY, October 14**

**7:30-9:00 AM: Breakfast in Granhall**

**9:00 AM to 10:15 AM: 3<sup>rd</sup> Session in Mountain-Lake Room**

9:00 – 10:15 – **3rd Year Data Slam Part 2**

**10:15 – 10:30 AM: Coffee Break**

**10:30 AM to 11:45 AM: 4<sup>th</sup> Session in Mountain-Lake Room**

10:30 – 10:50 – **Hillel Adesnik**  
“Cortical Microcircuits for Tactile Sensation”  
10:55 – 11:15 – **Randolph Helfrich** (Knight Lab)  
“The Rhythmic Nature of Cognition”  
11:20 – 11:40 – **Samantha Santacruz** (Carmena Lab)  
“Caudate Microstimulation Increases Value of Specific Choices”

**11:45 – 12:45 PM: Lunch in Garden Deck**

**12:50 PM to 2:20 PM: 5<sup>th</sup> Session in Mountain-Lake Room**

12:50 – 1:10 PM: – **David Foster**

"Mechanisms of Hippocampal Place Cell Sequences"

1:15 – 1:35 PM: – **Zach Newman** (Isacoff Lab)

"Nanoscale Molecular Mechanisms of Synaptic Diversity and Plasticity"

1:40 – 2:00 PM: – **Julie Elie** (Theunissen lab)

"Neural Code for the Meaning of Vocalizations in the Zebra Finch"

**2:00 – 2:15 PM: Coffee Break**

**2:15 PM to 3:35 PM: 6<sup>th</sup> Session in Mountain-Lake Room**

2:15 – 2:35 PM: – **Jack Gallant**

"The Long Road to a Computational Model of Area V4"

2:40 – 3:00 PM: – **Johannes 'Han' de Jong** (Lammel Lab)

"A Neural Circuit Mechanism for Aversive Coding in the Mesolimbic Dopamine System"

3:05 – 3:25 PM: – **Kristofer Bouchard**

"Overview of the Neural Systems and Engineering Lab"

3:30 – 3:35 PM: **Award Presentation**

**3:30 – 6:30 PM: Free Time!**

**5:30 – 6:30 PM – Faculty and Postdoc Networking – Alumni Room**

**6:30 – 7:30 PM: Dinner in Granhall**

**7:30 - 8:30 PM: 2<sup>nd</sup> Poster Session and Award in Bay Room**

**8:45 - 2:00 AM: Talent Show and Social in Ski Hut**

**SUNDAY, October 15**

**7:30-10:00 AM: Breakfast in Granhall**

**Checkout Before 11 AM**