

2021 UC Berkeley Neuroscience Annual Conference

**Friday, October 8, 2021
Memorial Stadium**

9:00 – 9:15: WELCOME AND OPENING REMARKS

9:00 – 9:05: **Ehud Isacoff, Helen Wills Neuroscience Institute**

9:05 – 9:10: **Michael Yartsev, Bioengineering**

9:10 – 9:15: **Michael Silver, Helen Wills Neuroscience Institute**

9:15 – 10:45: SESSION 1

9:15 – 9:35: **Tianjiao Zhang (Gallant Lab)**

Representation of Navigation-Related Information in the Human Brain

9:35 – 10:00: **Michael Silver**

The UC Berkeley Center for the Science of Psychedelics

10:00 – 10:20: **Will Liberti (Yartsev Lab)**

A Stable Hippocampal Code Underlies Aerial Navigation in Bats

10:20 – 10:45: **Doris Tsao**

Distinguishing Bottom-Up from Top-Down Signals in the Macaque Face Patch System

10:45 – 11:00: BREAK

11:00 – 11:50: KEYNOTE SPEAKER

Robin Carhart-Harris, Psychedelics Division, UCSF

Psychedelics: Brain Mechanisms

11:50 – 12:50: LUNCH

12:50 – 1:40: KEYNOTE SPEAKER

Eddie Chang, UCSF

Functional Organization of Human Auditory Cortex in Speech Perception

1:40 – 2:45: SESSION 2

1:40 – 2:00: **Sarah Yang (Landry & Schaffer Labs)**

Illuminating Dopamine Dynamics in Huntington's Disease Using Near Infrared Catecholamine Sensors

2:00 – 2:25: **Karthik Shekhar**

Single-Cell Transcriptomic Analysis of Visual System Development

2:25 – 2:45: **Villy Karalis (Bateup Lab)**

Designing Therapeutic Interventions for the Neurodevelopmental Disorder TSC

2:45 – 3:00: BREAK

3:00 – 4:30: Data Slam

4:30 – 5:35: SESSION 3

4:30 – 4:50: **Holly Gildea (Dillin Lab)**

Non-Serotonergic Control of Lifespan and Stress Resistance by Glia

4:50 – 5:10: **Mathew Summers (Feller Lab)**

Distinct Inhibitory Pathways Control Velocity and Directional Tuning in the Retina

5:10 – 5:35: **Yvette Fisher**

Flexibility of Visual Input to the Drosophila Compass Network

5:35 – 7:00: POSTER SESSION/RECEPTION

Adesnik Lab

Hayley Bounds

Multifunctional Cre-Dependent Transgenic Mice for High-Precision All-Optical Interrogation of Neural Circuits

Bouchard Lab

Ji Hyun Bak

Inference of Dynamic Functional Coupling from Large Neural Recordings In The Presence Of External Stimuli and Correlated Noise

John Hermiz

EChip: A Compact Integrated Circuit with 512 Channels for In-Vivo Electrophysiology

Ankit Kumar

Deciphering Dynamics: From Networks to Neurons to Subspaces

Jesse Liveze

Not Optimal, Just Noisy: The Geometry of Noise Correlations Leads to Highly Suboptimal Coding

Rui Meng

Bayesian Inference in High-Dimensional Time-Series with the Orthogonal Stochastic Linear Mixing Model

Brett Nelson

ReachMaster3D: A 3-DOF Robotic System Capable of Automated 3-D Kinematic Extraction of Freely Behaving Rodent Reaching Compatible With In-Vivo Electrophysiology

Feller Lab

Joshua Tworig

Excitatory Neurotransmission Activates Compartmentalized Calcium Transients in Developing Müller Glia without Affecting Lateral Process Motility

Foster Lab

John Widloski

Neural Variability is Quenched During Hippocampal Replay.

Ji Lab

Ryan Natan

Psychedelics and Anesthetics Differentially Modulate Glutamate Signaling Among Layers in Visual Cortex

Liu Lab

Koyam Morales Weil

RF Waves Control Neuronal Membrane Potential Mediated by the FeRIC System

MCB Industrial Affiliate Program - Grifols Diagnostic Solutions

Rachel Britton

Approaching Diseases of Aging: Insight into Age-Related Cognitive Decline and Blood Brain Barrier Dysfunction in C57BL/6 Mice

Meghan Campbell

A Therapeutic Human Plasma Fraction Enhances Cognitive Function in Aging and Neurodegenerative Disease Through Multiple Mechanisms of Action

Olshausen Lab

Christopher Kymn

Vector Function Architectures as a Framework for Neural Computation

Saijo Lab

Madeline Arnold

Investigating Immune Responses and Sex Differences in the Mouse Fetal Brain Using Single Cell RNA Sequencing



Theunissen Lab

Pepe Alcami

*Extensive GJD2 Expression in the Song Motor Pathway Reveals the
Extent of Electrical Synapses in the Songbird Brain*

Wilbrecht Lab

Juliana Chase

*Gain of Function in Early Learning and Inflexibility in Later Learning in
TSC2+/- Male Mice*

Wyrobek Lab

Andy Wyrobek

CNS Proteomic Biomarkers of Susceptibility to EPM-Anxiety in Male Rats