

Duke Neurobiology



Graduate Program Annual Retreat

Sept 27 – 29, 2017

Wrightsville Beach, NC

Holiday Inn Resort

1706 N Lumina Ave, Wrightsville Beach, NC 28480

Wednesday, September 27

11:30am – 1:00pm	Hotel Arrival	
1:00 – 1:30 pm	Meet & Greet & Check-in	Hallway outside ballroom
1:30 – 3:20pm	Introduction – Steve Lisberger Talks (Session I)	Moderator: Steve Lisberger
1:40 – 2:00pm	Nicolas Brunel, Faculty Neurobiology	<i>Attractor dynamics in networks with learning rules inferred from data</i>
2:10 – 2:30pm	Janani Sundararajan, Student Mooney Lab	<i>Circuit mechanisms of movement-related changes in auditory detection</i>
2:40 – 3:05pm	David Gallegos, Student West Lab	<i>Psychostimulant-regulated chromatin plasticity in interneurons of the Nucleus Accumbens</i>
3:15 – 3:30pm	Break	
3:30 – 4:30 pm	Scavenger Hunt/activity	
4:40 – 5:40 pm	Keynote Speaker: Catherine Dulac, PhD HHMI, Harvard University	Introduction: Lindsey Glickfeld <i>Neurobiology of Social Behavior Circuits</i>
5:45 – 7:15 pm	Poster Session + Happy Hour	See attached list of presenters
Evening	Dinner on your own	

Thursday, September 28

8:45 – 9:30 am	Breakfast Buffet	
9:30 – Noon	Talks (Session II)	Moderator: Anne West
9:30 – 9:50 am	Jun Takato, Postdoc Wang Lab	<i>Brainstem sensorimotor loops regulating active touch</i>
10:00 – 10:20 am	Mai-Anh Vu, Student Adcock & Dzirasa Labs	<i>Functional neural networks underlying task performance in mice</i>
10:20 – 10:30	Break	
10:30 – 10:55 am	Lindsey Glickfeld, Faculty Neurobiology	<i>Linking computations in the mouse visual cortex to perception</i>

11:05 – 11:25 am	Amanda Lewis, Postdoc Grandl Lab	<i>Transduction of repetitive mechanical stimuli by Piezo1 and Piezo2 ion channels</i>
11:35 – 11:55 am	Jake Heffley, Student Hull Lab	<i>A New View of Cerebellar Learning</i>
12:00 – 2:30 pm	Lunch / Break	Volleyball/ free time
2:40 – 3:30pm	Industry Speaker: Nagesh K. Mahanthappa, PhD, MBA Scholar Rock	Introduction: Richard Mooney <i>How did a nice neurobiologist like you end up as a biotech executive?</i>
3:40 – 4:35 pm	Talks (Session III)	Moderator: Fan Wang
3:40 – 4:00 pm	Kate Meyer, Faculty Biochemistry	<i>Epitranscriptomic regulation of nervous system function</i>
4:10 – 3:30 pm	Masashi Tanaka, Postdoc Mooney Lab	<i>Dopamine reinforces auditory memories that guide vocal learning</i>
4:40 – 5:00 pm	Aaron Mitchell-Dick, Student Silver Lab	<i>Mitosis matters: mechanisms of pyramidal neuron generation</i>
5:00 – 6:45 pm	Poster Session + Happy Hour	See attached list of presenters
7:00 – 9:00 pm	Banquet Dinner Awards Ceremony	Awards and Student & Faculty Skits
9pm – midnight	DJ Nathan Wilkins	Main ballroom

Friday, September 29

No events planned Hotel checkout by 11am

Poster Presentations – Wednesday, September 27, 2017

Name	Lab	Poster Title
Cameron Blount and Nkemdilim Ndubuizu, Lab Technician	Dzirasa Lab	Stress Vulnerability Converges on Emergent Neural Network
Martin Bohlen, Postdoc	Sommer Lab	Viral Vectors for Use in Primate Eye Movement Optogenetic Research
Caley Burrus, Graduate Student	Eroglu Lab	Striatal projection neurons require Huntingtin for synaptic connectivity
Urann Chan, Graduate Student	West Lab	The histone demethylase Kdm6b is required for induction of a mature gene expression program in differentiating cerebellar granule neurons
Gregory Cogan, Faculty	Cogan Lab	Using Electrocorticography (ECoG) to study speech in the human brain
Bryson Deanhardt, Graduate Student	Volkan Lab	Epigenetic regulation of <i>fruitless</i> expression in olfactory neurons by social experience
Shataakshi Dube, Graduate Student	Soderling Lab	Proteomic and functional analysis of presynaptic actin regulation during synaptic transmission
Lara Duffney, Postdoc	Jiang Lab	Delineating the neural circuits underlying social behavior impairment in a Shank3 autism model
Yudong Gao, Postdoc	Soderling Lab	Chemico-genetic analysis of the axonal initial segment in vivo
Nate Hall, Postdoc	Lisberger Lab	Time course of multiple components of directional motor learning in smooth pursuit eye movements
Ricardo Hernandez-Martinez, Postdoc	Calakos Lab	Proteostasis control by eIF2 α signaling is required for dopamine modulation of cholinergic interneurons and normal movement
Xiaoyang Hu, Graduate Student	Matsunami Lab	The combinatorial neural code behind varying odorant concentrations
Dolores Irala, Postdoc	Eroglu Lab	A genetic screen to identify autism-linked genes that control astrocyte-synapse interactions
Breanna Kalmeta, Graduate Student	Grandl Lab	Functional and structural studies of purified Piezo ion channels in liposomes
Christopher Kozlowski, Graduate Student	Kay Lab	Elucidating the downstream signaling molecules involved in Megf10-mediated homotypic repulsion
Kamesh Krishnamurthy, Graduate Student	McNamara Lab	Validation of a Mouse Model to Investigate Cell Specific TrkB Activation During Epileptogenesis
Jinghao Lu, Graduate Student	Wang Lab	Seeds Cleansing CNMF for Spatiotemporal Neural Signals Extraction of Miniscope Imaging Data
Valerie Michael, Graduate Student	Mooney Lab	Activation of midbrain neurons drives vocalizations
Thomas Ray, Postdoc	Kay Lab	Sequencing and proteomic approach illuminates mRNA and protein isoform diversity and their contributions to neural development and disease
Erica Rodriguez, Graduate Student	Wang Lab	A craniofacial-specific monosynaptic circuit enables heightened affective pain

Suva Roy, Postdoc	Field Lab	Functional consequences of dopamine receptor modulation in the retina
Kiersten Ruda, Graduate Student	Field Lab	The impact of light adaptation on information encoded by retinal ganglion cell populations
Jonna Singh-Alvarado, Graduate Student	Mooney Lab	Imaging neural representations of learned vocalizations in the basal ganglia
Divya Subramanian, Graduate Student	Sommer Lab	Trade-off between expectations and evidence for visual continuity across saccades
Katie Tschida, Postdoc	Mooney Lab	Identifying a neural gate for courtship vocalizations in the mouse
Aashutosh Vihani, Graduate Student	Matsunami Lab	Semiochemical detection in the mouse main olfactory system shows sex-specific variability
Teleza Westbrook, Research Tech	Field Lab	Distribution and diversity of intrinsically photosensitive retinal ganglion cells in tree shrew
Shawn Willett, Graduate Student	Groh Lab	Functional properties of macaque inferior colliculus neurons
Ashley Wilson, Graduate Student	Glickfeld Lab	Temporal modulation of mouse visual cortex by selective attention
Yang Zhang, Postdoc	H. Yang Lab	Inferior Olivary TMEM16B Mediates Cerebellar Motor Learning

Poster Presentations – Thursday, September 28, 2017

Name	Lab	Poster Title
Minhal Ahmed, Undergraduate Student	Hull Lab	Locomotion-Related Complex Spike Modulation in the Mouse Cerebellar Vermis
Fernando Alsina, Postdoc	Silver Lab	Role of nucleolar protein Nop56 in neural stem cell and cortical development
Mor Ben-Tov Kuperberg, Postdoc	Mooney Lab	Population calcium imaging of HVC neurons in singing birds
Robin Blazing, Research Tech	Glickfeld Lab	The contribution of stimulus contrast vs. response history in contrast discrimination task outcomes
Tyler Bradshaw, Graduate Student	Soderling Lab	A Targeted-Proteomics Approach to Interrogate the Synaptopathology Underlying Monogenic Autism Spectrum Disorders
Samuel Brudner, Graduate Student	Mooney Lab	Pharmacologically probing cortico-basal ganglia contributions to song learning
Jon Cafaro, Postdoc	Field Lab	Real Time Motion Estimation From Neural Populations
Liang-Fu Chen, Graduate Student	West Lab	Histone acetylation at enhancers prolongs the activation of neuronal activity-inducible gene transcription
Jamie Croucher, Graduate Student	Soderling Lab	Uncovering the Interneuron Synaptic Proteome
Tim Darlington, Graduate Student	Lisberger Lab	Neural Implementation of Bayesian Sensory-Motor Behavior in Eye Movements

Rupali Gupta, Postdoc	Liedtke Lab	Expanding the neuroscience toolbox toward translational-medical use: Rx magnetogenetics
Mariah Hazlett, Graduate Student	West Lab	Specific activation of FosB transcription through targeted induction of histone acetylation
Ashley Henderson, Postdoc	Grandl Lab	Characterization of Protein-Lipid Interactions in the Gating Mechanism of Piezo1
Samuel Hulbert, Graduate Student	Jiang Lab	Determining the developmental role of Shank3 in the pathogenesis of Autism Spectrum Disorders
Li-Feng Jiang-Xie, Graduate Student	Wang Lab	Activation of the Neuronal Ensemble Orchestrating Anesthetic-Induced Unconsciousness
Miaomiao Jin, Graduate Student	Glickfeld Lab	Role of mouse higher visual areas in detecting orientation and contrast changes
Matthew Kearney, Graduate Student	Mooney Lab	The songbird VTA integrates opponent evaluative signals for vocal learning
Whasil Lee, Postdoc	Liedtke Lab	Chondrocyte inflammatory reprogramming in osteoarthritis involves enhanced expression and function of the mechanosensitive ion channel Piezo1
J. Patrick Mayo, Postdoc	Lisberger Lab	Correlated behavioral and neuronal response times in the cortical pursuit circuit
Amanda Munsch, Postdoc	Franks Lab	Go/no-go odor discrimination in head-fixed mice
Caitlin Paisley, Graduate Student	Kay Lab	Changes in Astrocyte Number over Development
Robin Perelli, Research Tech	Kay Lab	The effects of hyperoxia on astrocyte spatial patterning in the retina
Cameron Prigge, Postdoc	Kay Lab	Identifying new molecular cues that guide development of retinal direction-selective circuitry
Kunal Shroff, Undergraduate Student	Calakos Lab	ATF4 nuclear localization in response to ER stress in cellular models of Dyt1 dystonia
Jeff Stogsdill, Graduate Student	Eroglu Lab	Astrocytic neuroligins controls synaptic connectivity
Masashi Tanaka, Postdoc	Mooney Lab	Dopamine reinforces auditory memories that guide vocal learning
Martine Tremblay, Graduate Student	Jiang Lab	<i>Tet1</i> mediated transcriptional regulation of the oxytocin receptor gene in mouse brain
Jingjing Wang, Graduate Student	Kay Lab	Characterizing cell surface receptor multimeric complexes for homotypic recognition in developing retinal circuits
Jason Wu and Mike Young, Graduate Students	Grandl Lab	Inactivation of mechanically-activated Piezo1 ion channels is determined by the C-terminal extracellular domain and the inner pore-helix
Xiaoyang Yao, Graduate Student	Field Lab	Differential adaptation across direction selective retinal ganglion cells in mouse
Lupin Yin, Postdoc	Wang Lab	Identifying neurons and circuits mediating anesthesia-induced unconsciousness

List of Attendees

<i>Elise Adamson</i>	<i>Samuel Hulbert</i>	<i>Joseph Rittiner</i>
<i>Minhal Ahmed</i>	<i>Court Hull</i>	<i>Erica Rodriguez</i>
<i>Fernando Alsina</i>	<i>Dolores Irala</i>	<i>Suva Roy</i>
<i>Stuart Behling</i>	<i>Yong-hui Jiang</i>	<i>Kiersten Ruda</i>
<i>Mor Ben-Tov</i>	<i>Li-Feng Jiang-Xie</i>	<i>Miranda Scalabrino</i>
<i>Vikas Bhandawat</i>	<i>Miaomiao Jin</i>	<i>Miranda Shipman</i>
<i>Robin Blazing</i>	<i>Shuyang Jin</i>	<i>Kunal Shroff</i>
<i>Cameron Blount</i>	<i>NaYoung Jun</i>	<i>Debby Silver</i>
<i>Martin Bohlen</i>	<i>Maya Kaelberer</i>	<i>Jonnathan Singh Alvarado</i>
<i>Diego Bohorquez</i>	<i>Breanna Kalmeta</i>	<i>Dhanesh Sivadasan Bindu</i>
<i>Tyler Bradshaw</i>	<i>Boris Kantor</i>	<i>Pate Skene</i>
<i>Mary Rose Branch</i>	<i>Jeremy Kay</i>	<i>Jeff Stogsdill</i>
<i>Sam Brudner</i>	<i>Matthew Kearney</i>	<i>Divya Subramanian</i>
<i>Nicolas Brunel</i>	<i>Marguerita Klein</i>	<i>Janani Sundararajan</i>
<i>Caley Burrus</i>	<i>Chris Kozlowski</i>	<i>Tetsuya Takano</i>
<i>Sasha Burwell</i>	<i>Kamesh Krishnamurthy</i>	<i>Jun Takato</i>
<i>Jon Cafaro</i>	<i>Chay Kuo</i>	<i>Masashi Tanaka</i>
<i>Zac Caffall</i>	<i>Oluwadamilola Lawal</i>	<i>Jane Tandler</i>
<i>Urann Chan</i>	<i>Son Le</i>	<i>Nathan Taylor</i>
<i>Liang-Fu Chen</i>	<i>Whasil Lee</i>	<i>Gwenaelle Thomas</i>
<i>Gregory Cogan</i>	<i>Amanda Lewis</i>	<i>Stefanie Tokiyama</i>
<i>Jamie Croucher</i>	<i>Jenny Li</i>	<i>Martine Tremblay</i>
<i>Tim Darlington</i>	<i>Steve Lisberger</i>	<i>Marios Tringides</i>
<i>Bryson Deanhardt</i>	<i>Donald Lo</i>	<i>Katie Tschida</i>
<i>Shataakshi Dube</i>	<i>Jinghao Lu</i>	<i>Kaylin Tsukayama</i>
<i>Lara Duffney</i>	<i>Dongye Lu</i>	<i>Alex Vaz</i>
<i>Cagla Eroglu</i>	<i>Hiro Matsunami</i>	<i>Aashutosh Vihani</i>
<i>Greg Field</i>	<i>J. Patrick Mayo</i>	<i>Jonathan Viventi</i>
<i>Elizabeth Fleming</i>	<i>James McNamara</i>	<i>Mai-Anh Vu</i>
<i>Alyssa Florwick</i>	<i>Audrey Mercer</i>	<i>Fan Wang</i>
<i>David Gallegos</i>	<i>Kate Meyer</i>	<i>Jingjing Wang</i>
<i>Yudong Gao</i>	<i>Valerie Michael</i>	<i>Isaac Weaver</i>
<i>Max Gillett</i>	<i>Aaron Mitchell-Dick</i>	<i>Anne West</i>
<i>Sam Gilmore</i>	<i>Jeff Mohl</i>	<i>Teleza Westbrook</i>
<i>Lindsey Glickfeld</i>	<i>Marcia Montoya</i>	<i>William Westsel</i>
<i>Jorg Grandl</i>	<i>Richard Mooney</i>	<i>Shawn Willett</i>
<i>Rupali Gupta</i>	<i>Carlene Moore</i>	<i>Ashley Wilson</i>
<i>Nathan Hall</i>	<i>Amanda Munsch</i>	<i>Jason Wu</i>
<i>Tori Hall</i>	<i>Shiva Nagappan</i>	<i>Haidun Yan</i>
<i>Mariah Hazlett</i>	<i>Nkemdilim Ndubuizu</i>	<i>Huanghe Yang</i>
<i>Jake Heffley</i>	<i>Caitlin Paisley</i>	<i>Rebecca Yang</i>
<i>Ashley Henderson</i>	<i>Robin Perelli</i>	<i>Xiaoyang Yao</i>
<i>Ricardo Hernandez-Martinez</i>	<i>Cameron Prigge</i>	<i>Luping Yin</i>
<i>Erin Hisey</i>	<i>Vanessa Punal</i>	<i>Michael Young</i>
<i>Xiaoyang Hu</i>	<i>Juan Ramirez</i>	<i>Yang Zhang</i>
<i>Thuy Hua</i>	<i>Thomas Ray</i>	