

Sunday, March 20th

3:00 pm Check-in

6:00 pm Reception (Lobby)

7:00 pm Dinner

8:00 pm Keynote Address:

Allison Doupe, University of California, San Francisco

A look forward and back: What can songbirds and mice teach us about processing and producing vocalizations?

9:00 pm Refreshments available at Bob's Pub

Town Hall Voting

Don't forget to grab a ballot and vote on the Town Hall topics and panelists. Ballot boxes are located at both entrances to the Auditorium.

Monday, March 21st

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 1: Acoustic structure of social communication signals**
Chair: Roian Egnor
- 9:00 am **Kurt Hammerschmidt**, German Primate Center
Structural and functional complexity of ultrasonic vocalizations in mice
- 9:20 am **Matina Kalcounis-Rueppell**, University of North Carolina, Greensboro
Understanding the behavioral context of ultrasound production by free-living mice in the wild
- 9:40 am **Clémentine Vignal**, Université Lyon/Saint-Etienne
Bird calls: The vocal basis of a social network
- 10:00 am **Ofer Tchernichovski**, City University of New York
Song learning and song culture in the zebra finch
- 10:20 am Questions / Discussion
- 10:30 am Break
- 11:00 am Session 2: Vocal structure: Listening and learning**
Chair: Sarah Woolley
- 11:00 am **Elena Rivas**, Janelia Farm Research Campus
Analysis of mouse ultrasound vocalizations
- 11:20 am **Michael Brainard**, University of California, San Francisco
Adaptive vocal plasticity in crystallized adult birdsong
- 11:40 am **Erich D. Jarvis**, Duke University Medical Center
Of mice, birds, and humans: The mouse ultrasonic song system has features once thought unique to song learning birds and humans
- 12:00 pm *TBD*
- 12:20 pm Questions / Discussion
- 12:30 pm Lunch
- 1:00 pm Tour (optional - meet at reception)

2:00 pm **Session 3: Vocal Learning**
Chair: Allison Doupe

2:00 pm **Sarah Bottjer**, University of Southern California
Vocal learning in parallel cortico-thalamic basal ganglia loops

2:20 pm **Michale S. Fee**, Massachusetts Institute of Technology
The role of basal ganglia-forebrain circuits in vocal learning in the songbird: A hypothesis

2:40 pm **Richard Hahnloser**, ETH Zurich and University of Zurich
The hebbian theory of sensorimotor learning and its application to birdsong learning

3:00 pm **David Perkel**, University of Washington
A form of synaptic plasticity well suited to contribute to vocal learning

3:20 pm Questions / Discussion

3:30 pm Break

4:00 pm **Session 4: Production of vocal signals**
Chair: Marta Moita

4:00 pm **S. E. Roian Egnor**, Janelia Farm Research Campus/HHMI
Correlations between respiration and ultrasonic vocalizations in mice

4:20 pm **Walter Metzner**, University of California, Los Angeles
Sound production in the isolated mouse larynx

4:40 pm **Roderick A. Suthers**, Indiana University
Vocal tract filters in birdsong

5:00 pm **Marc Schmidt**, University of Pennsylvania
Coordinating both hemispheres during the production of song

5:20 pm Questions / Discussion

5:30 pm Poster Reception

6:30 pm Dinner

Janelia Farm Conference: Producing and Perceiving Complex Acoustic Signals

8:00 pm **Session 5: Genetics of vocalizations and vocal learning**
Chair: David Perkel

8:00 pm **David F. Clayton**, University of Illinois at Urbana-Champaign
Developing a “Systems Biology” approach to song learning and perception

8:20 pm **Stephanie White**, University of California, Los Angeles
Singing-driven networks

8:40 pm **Constance Scharff**, Freie Universitat Berlin
Deep homologies in birdsong and human speech?

9:00 pm Refreshments available at Bob’s Pub

Tuesday, March 22nd

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 6: Listening I: Representing signals in the CNS**
Chair: Christine Portfors
- 9:00 am **Daniel Margoliash**, University of Chicago
Redefining the songbird auditory functional hierarchy in space and time
- 9:20 am **Frederic Theunissen**, University of California, Berkeley
Statistics of natural sounds, invariance, perception and neural representations
- 9:40 am **Tim Gentner**, University of California, San Diego
Coding natural communication signals in an auditory forebrain
- 10:00 am **Richard Mooney**, Duke University
Sensorimotor circuits for vocal perception
- 10:20 am Questions / Discussion
- 10:30 am Break
- 11:00 am Session 7: Listening II: Representing signals in the CNS**
Chair: Tim Gentner
- 11:00 am **Sarah M. Woolley**, Columbia University
Influences of experience on vocalization coding in the auditory system
- 11:20 am **Robert C. Liu**, Emory University
A “songbird-approach” to studying mouse acoustic communication
- 11:40 am **Christine Portfors**, Washington State University
Acoustic distortion products mediate responses to complex sounds in the auditory midbrain of awake mice
- 12:00 pm **George D. Pollak**, University of Texas at Austin
Its about time: How input timing is used and not used to create emergent properties in the auditory system
- 12:20 pm Questions / Discussion
- 12:30 pm Lunch

- 2:00 pm** **Session 8: Social modulation of vocal signaling**
Chair: Stephanie White
- 2:00 pm **Laura M. Hurley**, Indiana University
Serotonin as a mechanism for context-dependent regulation of neural responses to vocalizations
- 2:20 pm **Jeffrey Wenstrup**, Northeastern Ohio Universities College of Medicine
Social vocalizations and evoked amygdalar responses in big brown bats
- 2:40 pm **Garet P. Lahvis**, Oregon Health & Science University
Prosody in rodents: Mouse vocalizations can mediate an empathic response
- 3:00 pm **Marta A.P. Moita**, Fundação Champalimaud
Social transmission of fear in rats: The role of ultrasonic vocalizations
- 3:20 pm Questions / Discussion
- 3:30 pm Break
- 4:00 pm** **Session 9: Recording Methods**
Chair: Frederic Theunissen
- 4:00 pm **Anthony Leonardo**, Janelia Farm Research Campus/HHMI
Wireless recording of neural signals from dragonflies (with applications to vertebrates...)
- 4:20 pm **Nachum Ulanovsky**, Weizmann Institute of Science
Optimal localization strategy in a biosonar system
- 4:40 pm Questions / Discussion
- 5:00 pm Poster Reception
- 6:00 pm Dinner (*last chance to cast votes for Town Hall panel and topics*)
- 7:15 pm High Velocity Social Interaction (aka speed dating) - Lobby
- 9:00 pm Refreshments (and musical instruments) available in Bob's Pub

Wednesday, March 23rd

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 10: What comparisons can be drawn between systems?
Chair: Gareth Lahvis**
- 9:00 am **Andrew Bass**, Cornell University
Evo-devo of hindbrain vocal pattern generators
- 9:20 am **Harvey J. Karten**, University of California, San Diego
Columnar microcircuits in avian and mammalian auditory "cortex"
- 9:40 am Meeting Summary, Richard Mooney**
- 10:30 am Break
- 11:00 am Town Hall Meeting**
Topics and panel members to be voted on during the meeting
- 12:00 pm Lunch and Departure (To-go boxes available in servery for those on first shuttle)
- 12:30 pm First shuttle to Dulles
1:15 pm Second shuttle to Dulles
2:00 pm Last shuttle to Dulles