

Sunday, April 6th

- 3:00 pm Check-in
- 6:00 pm Reception (*Lobby*)
- 6:30 pm Dinner
- 7:30 pm Welcome and Introduction**
- 7:45 pm Science Speed Dating! (*Lobby*)**
- 9:15 pm Refreshments available at Bob's Pub

NOTE:
Meals are in the **Dining Room**
Talks are in the **Auditorium**
Posters are in the **Lobby**

Monday, April 7th

- 7:00 am Breakfast (*service ends at 8:15am*)
- 8:30 am Session 1: Mechanisms underlying map formation, maintenance and function I**
Chair: Erin Diel
- 8:30 am **James A. Bednar**, University of Edinburgh
Developmental origin of feature maps in the primary visual cortex
- 8:55 am **Minoru Koyama**, Janelia Farm Research Campus/HHMI
Systematic connectivity patterns between two topographically organized regions in zebrafish locomotor circuits
- 9:20 am **Gordon MG Shepherd**, Northwestern University
Neocortical circuits: a projection neuron perspective
- 9:45 am Break
- 10:05 am Session 2: Mechanisms underlying map formation, maintenance and function II**
Chair: Florian Walker
- 10:05 am **S. Murray Sherman**, University of Chicago
Thalamus plays a central role in cortical functioning
- 10:30 am **Edvard I. Moser**, Norwegian University of Science and Technology
Modular organization of the entorhinal grid map
- 10:55 am **Guangying Wu**, George Washington University
The development of direction selectivity in the auditory system
- 11:20 am Break
- 11:40 am **Leonardo Belluscio**, National Institutes of Health
Understanding the olfactory bulb maps
- 12:05 pm **Tom Mrsic-Flogel**, University College London
Feature-specific connectivity in mouse visual cortex
- 12:30 pm Lunch (*Service ends at 1pm*)

How to Read a Map: Understanding Structure-Function Relationships in the Brain

- 1:30 pm** **Janelia Association of Research Scientists (JARS) Invited Talk**
Patricia Churchland, University of California, San Diego
Developing neurophilosophy & dodging potshots: A tale of love and dismay in the age of neuroscience
- 2:30 pm Break
- 3:00 pm** **Session 3: Maps everywhere, or maybe not**
Chairs: Saikat Ray
- 3:00 pm **Uwe Homberg**, Philipps-Universität Marburg
The polarotopic compass in the central complex of the locust brain
- 3:25 pm **Maurice J. Chacron**, McGill University
Processing of second order stimulus features in the electrosensory brain
- 3:50 pm **Amiram Grinvald**, Weizmann Institute of Science
VSDI imaging of distributed processing in the rat barrel cortex
- 4:15 pm Break
- 4:45 pm **Gordon M. Shepherd**, Yale School of Medicine
Mapping multidimensional space in the olfactory pathway
- 5:10 pm **Catherine Carr**, University of Maryland
Good enough maps for sound localization
- 5:35 pm **Andrew King**, University of Oxford
Coding of auditory space in the brain: From maps to dynamic and distributed representations
- 6:00 pm Poster Reception
- 7:15 pm Dinner
- 8:30 pm** **Panel Discussion**
- 9:30 pm Refreshments available at Bob's Pub

Tuesday, April 8th

- 7:30 am Breakfast (*service ends at 8:45am*)
- 9:00 am Session 4: Spatial maps**
Chair: Tobias Bockhorst
- 9:00 am **Elizabeth Buffalo**, Emory University
Seeing is remembering: Visual exploration and memory formation in nonhuman primates
- 9:25 am **Arseny Finkelstein**, Weizmann Institute of Science
Functional organization of 3D neural compasses in the bat brain
- 9:50 am Break & Group Photo
- 10:30 am Session 5: Computing with maps**
Chair: Patrick Kaifosh
- 10:30 am **Matteo Carandini**, University College London
Summation and division across a cortical map of visual space
- 10:55 am **Wolfgang Maass**, Technische Universität Graz
Emergence of computational function in cortical microcircuit motifs
- 11:20 am Break
- 11:40 am **Kevan AC Martin**, Swiss Federal Institute of Technology, Zurich
Organizing principles of cortical circuits and their function
- 12:05 pm **Idan Segev**, Hebrew University
What did I learn from digitally building the brain?
- 12:30 pm Lunch (*service ends at 1pm*)
- 1:30 pm Tour (*optional – meet at reception*)

How to Read a Map: Understanding Structure-Function Relationships in the Brain

- 2:30 pm** **Session 6: Where sensory meets motor I**
Chair: Romain Franconville
- 2:30 pm **Robert Wurtz**, National Institutes of Health
Shifting visual maps with corollary discharge
- 2:55 pm **Joshua Dudman**, Janelia Farm Research Campus/HHMI
A substrate for cortical competition in the dorsal striatum?
- 3:20 pm **Tim Murphy**, University of British Columbia
Spontaneous activity mapping in GCaMP3 mice provides topology of functional connections and symmetries between areas of somatomotor cortex
- 3:45 pm Break
- 4:05 pm **Tirin Moore**, HHMI/Stanford University
Prefrontal control of visual cortical signals and its role in perception
- 4:30 pm **Shreesh P. Mysore**, Johns Hopkins University
Stimulus selection for spatial attention: Neural building blocks
- 4:55 pm Poster Reception
- 7:00 pm Dinner
- 8:15 pm** **Panel Discussion**
- 9:30 pm Refreshments available at Bob's Pub

Wednesday, April 9th

- 7:30 am Breakfast (*service ends at 9:00am*)
- 9:30 am Session 7: Where sensory meets motor II**
Chair: Johannes Seelig
- 9:30 am **Michael P. Stryker**, University of California, San Francisco
How behavioral state changes the gain of primary visual cortex
- 9:55 am **Karel Svoboda**, Janelia Farm Research Campus/HHMI
From perception to action: the flow of information underlying a tactile decision
- 10:20 am **Richard Mooney**, Duke University
Two way traffic at the auditory - motor interface
- 10:45 am Break
- 11:05 am **Poster awards**
- 11:50 am Conclusion and Final Remarks
- 12:00 pm Lunch and Departure
- 12:30 pm First Shuttle to Dulles
1:30 pm Second Shuttle to Dulles
2:30 pm Last Shuttle to Dulles