

Junior Scientist Workshop on Theoretical Neuroscience
Janelia Research Campus | September 25-30, 2016
Synapse Room

Sunday, September 25

- 5:15 pm Reception (*Lobby*)
6:00 pm Dinner (*Dining Room*)
7:00 pm **Janelia Lab Head Talk: Karel Svoboda**
8:00 pm Refreshments available in Bob's Pub

Monday, September 26

- 7:30 am Breakfast available (*Dining Room – service ends at 8:45am*)
9:00 am **Talk: Nicholas Bush**, Northwestern University
Generalized linear models: a tool for predicting primary sensory neuron response to multidimensional stimuli
9:25 am **Talk: Jeff Dunworth**, University of Pittsburgh
Finite size effects and rare events in balanced networks
9:50 am Break
10:10 am **Talk: Kamesh Krishnamurthy**, University of Pennsylvania
Disorder and representation of odours in the olfactory pathway
10:35 am **Talk: Rajkumar Vasudeva Raju**, Rice University
Inference by reparameterization in neural population codes
11:00 am Break
11:20 am **Tutorial: Nicholas Bush**
12:20 pm Lunch (*Dining Room, service ends at 1pm*)
1:30 pm **Tutorial: Jeff Dunworth**
2:30 pm Break
2:50 pm **Tutorial: Kamesh Krishnamurthy**
3:50 pm Break
4:10 pm **Tutorial: Rajkumar Vasudeva Raju**
5:10 pm Break
6:00 pm Dinner (*Dining Room*)
7:00 pm **Janelia Lab Head Talk: Vivek Jayaraman**
8:00 pm Refreshments available in Bob's Pub

Tuesday, September 27

- 7:30 am Breakfast available (*Dining Room – service ends at 8:45am*)
9:00 am **Talk: Taskin Deniz**, Bernstein Center Freiburg
Solving the 2-Dimensional Fokker-Planck equation for strongly correlated neurons
9:25 am **Talk: Abbas Kazemipour**, University of Maryland
Laplace state-space models: observability, estimation, and application
9:50 am Break
10:10 am **Talk: Laureline Logiaco**, Columbia University
The role of thalamocortical loops for motor sequence generation
10:35 am **Talk: Anja Zai**, ETH Zurich and University of Zurich
The dynamics of reward based learning of sensorimotor mappings

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11:00 am	Break
11:20 am	Tutorial: Taskin Deniz
12:20 pm	Lunch (<i>Dining Room, service ends at 1pm</i>)
1:30 pm	Tutorial: Abbas Kazemipour
2:30 pm	Break
2:50 pm	Tutorial: Laureline Logiaco <i>Analysis of recurrent network dynamics</i>
3:50 pm	Break
4:10 pm	Tutorial: Anja Zai
5:10 pm	Break
6:00 pm	Dinner (<i>Dining Room</i>)
7:00 pm	Janelia Lab Head Talk: Alla Karpova
8:00 pm	Refreshments available in Bob's Pub

Wednesday, September 28

7:30 am	Breakfast available (<i>Dining Room – service ends at 8:45am</i>)
9:00 am	Talk: Nadav Amir , Hebrew University of Jerusalem <i>Action perception model for navigational learning</i>
9:25 am	Talk: Rui Ponte Costa , University of Oxford <i>Statistical long-term synaptic plasticity</i>
9:50 am	Break
10:10 am	Talk: Luis Carlos Garcia del Molino , New York University <i>Cortical microcircuit endowed with three interneuron subtypes exhibits a repertoire of multiple dynamical regimes</i>
10:35 am	Tutorial: Nadav Amir
11:35 am	Lunch (<i>Dining Room, service ends at 1pm</i>)
1:00 pm	Tour (<i>optional – meet at reception</i>)
2:00 pm	Tutorial: Rui Ponte Costa
3:00 pm	Break
3:20 pm	Tutorial: Luis Carlos Garcia del Molino
4:20 pm	Break
5:15 pm	BBQ Dinner (<i>Bob's Patio</i>)
7:00 pm	Janelia Lab Head Talk: Misha Ahrens
8:00 pm	Refreshments available in Bob's Pub

Thursday, September 29

7:30 am	Breakfast available (<i>Bob's Quiet Room – service ends at 8:45am</i>)
9:00 am	Talk: Rishidev Chaudhuri , The University of Texas at Austin <i>Architectures for high-capacity neural memory</i>
9:25 am	Talk: Hamza Giaffar , Cold Spring Harbor Laboratory <i>Deconstructing odorant identity via primacy in dual networks</i>
9:50 am	Break

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- 10:10 am **Talk: Grace Lindsay**, Columbia University
Modeling state-dependency and effects of acetylcholine in auditory cortex
- 10:35 am **Talk: Alex Williams**, Stanford University
A speed-precision tradeoff for trafficking in dendrites
- 11:00 am Break
- 11:20 am **Tutorial: Rishidev Chaudhuri**
- 12:20 pm Lunch (*Dining Room, service ends at 1pm*)
- 1:30 pm **Tutorial: Hamza Giaffar**
- 2:30 pm Break
- 2:50 pm **Tutorial: Grace Lindsay**
Automated fitting of neural circuit model parameters
- 3:50 pm Break
- 4:10 pm **Tutorial: Alex Williams**
Matrix and tensor decompositions
- 5:10 pm Break
- 6:00 pm Dinner (*Bob's Quiet Room*)
- 7:00 pm **Janelia Lab Head Talk: Josh Dudman**
- 8:00 pm Refreshments available in Bob's Pub

Friday, September 30

- 7:30 am Breakfast available (*Bob's Quiet Room – service ends at 8:45am*)
- 9:00 am **Talk: Vishwa Goudar**, University of California, Los Angeles
Encoding time-varying sensory and motor patterns as temporally invariant trajectories in recurrent neural networks
- 9:25 am **Talk: Jonathan Platkiewicz**, The City College of New York
Inferring microcircuit connectivity dynamics from spike data
- 9:50 am Break
- 10:05 am **Tutorial: Vishwa Goudar**
- 11:05 am Break
- 11:20 am **Tutorial: Jonathan Platkiewicz**
Nonparametric statistics for spike data analysis
- 12:20 pm Conclusion (*Lunch service ends at 1pm*)
- 1:00 pm First Shuttle to Dulles
- 2:00 pm Second Shuttle to Dulles
- 3:00 pm Last Shuttle to Dulles

PARTICIPANTS

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**denotes organizers*