Swartz Foundation Annual Meeting  
July 21-24, 2019 | Janelia Research Campus  
AXON/DENDRITE ROOM

Sunday, July 21

Arrival and check-in
6:00 pm  Welcome Reception (Lobby)
7:00 pm  Dinner (Dining Room)
8:00 pm  Refreshments available at Bob’s Pub

Monday, July 22

8:00 am  Breakfast available in the Servery (service ends at 9:15am)
9:30 am  Session 1
9:30 am  Nirag Kadakia, Yale University  
Universal front-end adaptation confers robust combinatorial odor coding in natural environments
10:15 am  Michael J. Morais, Princeton University  
Extending efficient coding to more diverse families of optimal codes in Bayesian observer models
11:00 am  Gaia Tavoni, University of Pennsylvania  
Constructing optimal filters for dynamic statistical inference
11:45 am  Lunch in the Servery (service ends at 1pm)
1:00 pm  Session 2
1:00 pm  Mikhail Genkin, Cold Spring Harbor Laboratory  
Inference of interpretable dynamical models from large-scale neural activity recordings
1:45 pm  Sam Lewallen, Harvard University  
Dimensionality and dynamics
2:30 pm  Mu Qiao, California Institute of Technology  
Independent discriminant analysis for RNAseq of neurons
3:15 pm  Break
3:45 pm  Session 3
3:45 pm  Merav Stern, University of Washington  
Inferring neural population spiking rate from wide-field calcium recordings
4:30 pm  Chengcheng Huang, University of Pittsburgh  
Circuit models of low dimensional shared variability in cortical networks
5:15 pm  Charles Cosnier-Horeau, Brandeis University  
Continuity and related issues in the V1 representation
6:00 pm  Poster Reception (Lobby)
7:00 pm  Dinner (Dining Room)
8:00 pm  Refreshments available at Bob’s Pub
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**Tuesday, July 23**

8:00 am  Breakfast available in the Servery *(service ends at 9:15am)*

9:30 am  Session 4

9:30 am  **Alex Kuczala**, Salk Institute/UCSD  
*Eigenvalue spectra of random matrices with block-structured correlations*

10:15 am  **Rainer Engelken**, Columbia University  
*Dimensionality and entropy of spontaneous and evoked neural rate dynamics*

11:00 am  **Ulises Pereira**, New York University  
*Memory and chaos in sparsely connected recurrent neuronal networks*

11:45 am  Lunch *(service ends at 1pm)*

12:30 pm  Building Tour *(optional – meet at reception)*

1:30 pm  Session 5

1:30 pm  **Leandro Alonso**, Brandeis University  
*Modeling the differential resilience of neurons and networks to perturbations*

2:15 pm  **Agostina Palmigiano**, Columbia University  
*Statistics of network responses to perturbations*

3:00 pm  **Sergey Shuvaev**, Cold Spring Harbor Laboratory  
*Deep reinforcement R-learning in actor-critic model can explain mouse foraging behavior*

3:45 pm  Break

4:15 pm  Session 6

4:15 pm  **Bolun Chen**, Brandeis University  
*Attractor-state itinerancy in neural circuits with synaptic depression*

5:00 pm  **Alessandro Ingrosso**, Columbia University  
*Training dynamically balanced excitatory-inhibitory networks*

5:45 pm  **Nimrod Shaham**, Harvard University  
*Continual learning and replay in a sparse forgetful Hopfield model*

6:30 pm  Reception *(Lobby)*

7:30 pm  Dinner *(Dining Room)*

8:30 pm  Refreshments available at Bob’s Pub
## Wednesday, July 24

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 am</td>
<td>Breakfast available in the Servery <em>(service ends at 9:15am)</em></td>
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<tr>
<td>9:30 am</td>
<td>Session 7</td>
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| 9:30 am| **Aine Byrne**, New York University  
*A neural circuit model for learning a beat* |
| 10:15 am| **Madhu Advani**, Harvard University  
*A new role for sparse expansion in neural networks* |
| 11:00 am| **Jonathan Kadmon**, Stanford University  
*Improving coding fidelity in neuronal networks by harnessing noise and chaos* |
| 11:45 am| Conclusion / Lunch *(service ends at 1pm)*                           |
| 12:30 pm| First Shuttle to Dulles Airport                                      |
| 1:30 pm| Second Shuttle to Dulles Airport                                     |
| 2:30 pm| Last shuttle to Dulles Airport                                       |

## POSTER PRESENTATIONS

- **Batuhan Baserdem**, Cold Spring Harbor Laboratory  
  *Smoothed particle hydrodynamics*

- **Hannah Choi**, University of Washington  
  *Data-driven models of the mouse mesoscale connectome: network structure and functionality*

- **Srinivas Gorur Shandilya**, Brandeis University  
  *Compensation of size change coexists with sensitivity to perturbations in a model of neuronal regulation*

- **Gabrielle Gutierrez**, University of Washington  
  *Nonlinear convergence preserves information*

- **Kyo Iigaya**, California Institute of Technology  
  *Distributed neural computations underlying the construction of subjective value*

- **Rich Pang**, University of Washington  
  *Excitability-modulated sequences and computation in bioinspired neural networks*

- **Siwei Qiu**, Brandeis University  
  *Context-dependent computation by randomly connected attractor networks with synaptic depression*
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