Computational Journal Club, 2016-2017

**Fall 2016**

**Aug 29**
John Lisman (Brandeis)
*The rise and demise of spike-timing dependent plasticity*

**Sep 2 (Fri)**
John Beggs (University of Indiana)
*High-degree neurons feed cortical computations*

**Sep 8 (Thurs)**
Dan Merfeld (Harvard Medical School)
*A confidence model for vestibular psychophysical thresholds*

**Sep 12**
Jonathan Touboul (Harvard Medical School)
*Singularities in the functional organization of the cat visual cortex, and their possible organizing principles*

**Sep 19**
Chris Harvey (Harvard Medical School)
*Dynamics of population codes across cortex during navigation-based decision tasks*

**Sep 26**
Daniel Acker (Paradis Lab)

**Oct 10**
Paul Miller (Brandeis)
*Dynamical systems, attractors, and neural circuits*

**Oct 17**
Volen Retreat

**Oct 25 (Tues)**
Roshan Nanu (Jadhav Lab)

**Oct 31**
Suman Guha (Jadhav Lab)

**Nov 7**
Peter Bex (Northeastern University)
*A unifying model of orientation crowding in peripheral vision*

**Nov 21**
Paul Miller (Brandeis)

**Nov 28**
Jake Hinman (Boston University, Hasselmo Lab)
*Entorhinal and striatal representations of space*
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Topic</th>
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<tr>
<td>Dec 12</td>
<td>Robert Ajemian (MIT)</td>
<td><em>How can motor memories for sensorimotor skills persist robustly despite perpetual synaptic drift and decay?</em></td>
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<td><strong>Spring 2017</strong></td>
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<td>Jan 12 (Thurs)</td>
<td>Bolun Chen (Boston College, Mirollo Lab)</td>
<td><em>New approaches to coupled oscillator systems</em></td>
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<td>Jan 13 (Fri)</td>
<td>Nirak Kadakia (UCSD, Arabanel Lab)</td>
<td><em>Nonlinear methods for estimating biophysical neural systems</em></td>
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<td>Jan 30</td>
<td>John Lisman (Brandeis)</td>
<td>The need for dendritic NMDA spikes for timing-dependent associative LTP</td>
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<td>Feb 6</td>
<td>Gene Tunik (Northeastern)</td>
<td>Muscle-cortical mapping via TMS</td>
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<td>Feb 27</td>
<td>Mark Harnett (MIT)</td>
<td><em>Cellular and circuit mechanisms for associative computations in retrosplenial cortex</em></td>
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<td>Mar 13</td>
<td>Fernando Fernandez (Boston University)</td>
<td><em>Intracellular spontaneous activity in somatosensory cortex indicates unbalanced excitatory inputs</em></td>
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<td>Mar 20</td>
<td>Michael Hasselmo (Boston University)</td>
<td><em>Modeling goal-directed behavior based on grid cells</em></td>
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<td>Mar 27</td>
<td>Leandro Alonso (Rockefeller University)</td>
<td><em>Criticality in neural dynamics</em></td>
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Apr 19 (Wed) Shen Wang (Van Hooser Lab)

Apr 24 Steve Ramirez (Harvard Center for Brain Science)
Artificially activating memories to alleviate psychiatric disease-like states