

## **Full Schedule**

### **Sunday March 29<sup>th</sup>**

- |         |                                     |
|---------|-------------------------------------|
| 3:00 pm | Check-in                            |
| 6:00 pm | Reception                           |
| 7:00 pm | Dinner                              |
| 8:00 pm | Introductory Remarks (Seminar Room) |
| 8:45 pm | Refreshments available at Bob's Pub |

**Monday March 30<sup>th</sup>**

- 7:30 am Breakfast
- 9:00 am Session 1: Cortical Structure - 1**  
**Chair: Rafa Yuste**
- 9:00 am **Kevan A. C. Martin**, University of Zurich/ETH  
*The art of neocortex*
- 9:30 am **Javier de Felipe**, Cajal Institute  
*The synaptic organization of the perisomatic region of pyramidal cells*
- 10:00 am **Jon Kaas**, Vanderbilt University  
*The non-uniformity of cortical architecture*
- 10:30 am Break and Group Photo
- 11:00 am Session 2: Cortical Structure - 2**  
**Chair: Rafa Yuste**
- 11:00 am **Alex Thomson**, The School of Pharmacy, University of London  
*Specificity and selectivity in neocortical circuits*
- 11:30 am **Ed Callaway**, The Salk Institute  
*Comparing cortical circuits across areas and species*
- 12:00 pm **Dmitri Chklovskii**, Janelia Farm Research Campus/HHMI  
*Statistical analysis and theory of dendritic morphology*
- 12:30 pm Lunch
- 1:00 pm Tour (optional)
- 2:15 pm Session 3: Cortical Structure/Function**  
**Chair: Michael Shadlen**
- 2:15 pm **Alessandra Angelucci**, University of Utah  
*Anatomical circuits for classical and extra-classical receptive field interactions in macaque V1*
- 2:45 pm **Judith A. Hirsch**, University of Southern California  
*Shared and distinct features of neural circuits in the visual thalamus and cortex of the cat*

## Computations in Neocortical Circuits: What does the Cortex do?

- 3:15 pm **Michael Brecht**, Humboldt-Universität zu Berlin  
*How do single neurons in the rat's cortex contribute to movement and sensation?*
- 3:45 pm Break
- 4:15 pm Poster Session 1**
- 6:00 pm Reception
- 7:00 pm Dinner
- 8:00 pm Rountable 1: Is there a canonical cortical microcircuit?**  
**Discussion Leaders:** Alex Thomson and Rafa Yuste  
**Comments:** Kevan Martin, Javier de Felipe, Jon Kaas, Ed Callaway

**Tuesday March 31<sup>st</sup>**

- 7:30 am Breakfast
- 9:00 am Session 4: Cortical Function**  
**Chair: Larry Abbott**
- 9:00 am **Wolf Singer**, Max Planck Institute for Brain Research  
*Distributed processing and temporal codes in neuronal networks*
- 9:30 am **Tony Movshon**, New York University  
*Decoding cortical population signals*
- 10:00 am **Gina Turrigiano**, Brandeis University  
*Visually-driven metaplasticity of layer 5 neocortical pyramidal neuron intrinsic excitability*
- 10:30 am Break
- 11:00 am Session 5: Cortical Inhibition**  
**Chair: Larry Abbott**
- 11:00 am **Hannah Monyer**, University of Heidelberg  
*The functional role of inhibition for cognitive processes*
- 11:30 am **Gabor Tamas**, University of Szeged  
*Unitary, GABAergic volume transmission: Presynaptic effects of single neurogliaform cells in the neocortex*
- 12:00 pm **Massimo Scanziani**, University of California, San Diego  
*Somatic and dendritic inhibition differentially control the dynamic range of pyramidal cells*
- 12:30 pm Lunch
- 2:00 pm Session 6: Cortical Computation - 1**  
**Chair: Alex Thomson**
- 2:00 pm **Charles F. Stevens**, Salk Institute  
*Computations in visual cortex*
- 2:30 pm **Michael Shadlen**, University of Washington, School of Medicine  
*Circuits in context*
- 3:00 pm **Rafael Yuste**, HHMI/Columbia University  
*The cortex as a distributed network of linear integrators*

Computations in Neocortical Circuits: What does the Cortex do?

- 3:30 pm Break
- 4:00 pm Poster Session 2**
- 6:00 pm Reception
- 7:00 pm Dinner
- 8:00 pm **Session 7: Cortical Computation - 2**  
**Chair: Alex Thomson**
- 8:00 pm **Larry F. Abbott**, Columbia University College of Physicians & Surgeons  
*Cortical circuits as model builders*
- 8:30 pm **Haim Sompolinsky**, The Hebrew University  
*Computational roles for generic cortical circuits*
- 9:00 pm **Misha Tsodyks**, Weizmann Institute of Science  
*Population spikes in a model of primary auditory cortex*

## Wednesday April 1<sup>st</sup>

- 7:30 am Breakfast
- 9:00 am Session 8: Cortical Plasticity**  
**Chair: Michael Shadlen**
- 9:00 am **Michael Stryker**, University of California, San Francisco  
*Mechanisms of competitive interaction between inputs for the regulation of function in the visual cortex*
- 9:30 am **David Fitzpatrick**, Duke University Medical Center  
*Imaging the experience-dependent emergence of functional circuits in visual cortex*
- 10:00 am Break
- 10:30 am Roundtable 2: Is there a canonical cortical computation?**  
**Discussion Leaders:** Larry Abbott and Michael Shadlen  
**Comments:** Charles Stevens, Haim Sompolinsky, Michael Stryker
- 12:30 pm Lunch (take out boxes from servery available for those on first shuttle)
- 12:45 pm First shuttle to Dulles  
1:30 pm Second shuttle to Dulles  
2:15 pm Last shuttle to Dulles