

Sunday, March 13th

3:00 pm Check-in

6:00 pm Reception (Lobby)

7:00 pm Dinner

8:00 pm Opening Remarks: Alexander Borst, Max Planck Institute of Neurobiology

8:10 pm Plenary Lecture: Dale Purves, Duke-NUS Graduate Medical School
Understanding vision in empirical terms

9:10 pm Refreshments available at Bob's Pub

Monday, March 14th

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 1: Detecting Motion**
Chair: Michael Reiser
- 9:00 am **Thomas R. Clandinin**, Stanford University
Dissecting visual behavior in Drosophila
- 9:30 am **Maximilian A. Joesch Krotki**, Harvard University
ON- and OFF-pathways in Drosophila motion vision
- 9:50 am **Claude Desplan**, New York University
Processing of visual information in the medulla
- 10:20 am Break
- 10:50 am Session 2: Physiology in the Behaving Fly**
Chair: Roger Hardie
- 10:50 am **Gaby Maimon**, The Rockefeller University
Visual processing in flying Drosophila
- 11:20 am **Juergen Haag**, Max-Planck-Institute of Neurobiology
Central gating of fly optomotor response
- 11:50 am **Johannes D. Seelig**, Janelia Farm Research Campus/HHMI
Calcium imaging in Drosophila during walking and flight behavior
- 12:10 pm **Eugenia Chiappe**, Janelia Farm Research Campus/HHMI
Modulation of speed-sensitivity of a motion-sensitive neuron during walking
- 12:30 pm Lunch
- 2:00 pm Session 3: Detecting Motion**
Chair: Ian Meinertzhagen
- 2:00 pm **Holger G. Krapp**, Imperial College London
Sensing the natural modes of motion
- 2:30 pm **Martin Egelhaaf**, Bielefeld University
Active vision in insects: Strategies and mechanisms of spatial orientation
- 3:00 pm **Dierk F. Reiff**, Max Planck Institute of Neurobiology
Dscams, dendritic anatomy and LPTC function

- 3:30 pm Break
- 4:00 pm Session 4: Detecting Object and Feature**
Chair: Martin Egelhaaf
- 4:00 pm **David O'Carroll**, University of Adelaide
Neural mechanisms underlying small target discrimination by insects
- 4:30 pm **Fabrizio Gabbiani**, Baylor College of Medicine
Neural computations underlying collision avoidance behaviors
- 5:00 pm **Karin Nordström**, Uppsala University
Response latency and selectivity in target detection
- 5:30 pm Poster Reception
- 7:00 pm Dinner
- 8:00 pm Refreshments available at Bob's Pub**

Tuesday, March 15th

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 5: Detecting Object and Feature (continued)**
- 9:00 am **Mark Frye**, HHMI/University of California, Los Angeles
Figure tracking dynamics in fruit flies
- 9:30 am Session 6: Coding and Adaptation**
Chair: Fabrizio Gabbiani
- 9:30 am **Roger C. Hardie**, University of Cambridge
*The mechanism of excitation in *Drosophila* photoreceptors*
- 10:00 am **Simon Laughlin**, University of Cambridge
Recipes for energy efficient brains glimpsed in insect eyes
- 10:30 am Break
- 11:00 am **Adrienne Fairhall**, University of Washington
Adaptive coding in coding of fly motion and beyond
- 11:30 am **Mikko Juusola**, The University of Sheffield
*Structural and stochastic mechanisms of light adaptation and coding in *Drosophila* photoreceptors*
- 12:00 pm Lunch
- 12:45 pm Tour (optional - meet at reception)
- 2:00 pm Session 7: Coding and Adaptation (continued)**
- 2:00 pm **Shaul Druckmann**, Janelia Farm Research Campus/HHMI
Predictive coding in the early visual system
- 2:20 pm Session 8: Connectivity of Visual Circuits**
Chair: Nick Strausfeld
- 2:20 pm **Ian A. Meinertzhagen**, Dalhousie University
Synaptic circuits in the fly's medulla column: Progress towards a connectome
- 2:50 pm **Shin-Ya Takemura**, Janelia Farm Research Campus/HHMI
Semi-automated reconstruction of neurons in the fly's medulla

- 3:10 pm **Aljoscha Nern**, Janelia Farm Research Campus/HHMI
Genetic dissection of the cellular neuroanatomy of the optic lobes
- 3:30 pm Break
- 4:00 pm Session 9: Connectivity of Visual Circuits (continued)**
Chair: Claude Desplan
- 4:00 pm **Nicholas J. Strausfeld**, University of Arizona
The other eighty percent
- 4:30 pm **Kei Ito**, The University of Tokyo
Organization of the optic glomeruli in the cerebrum of the fly brain
- 5:00 pm **Marta Rivera-Alba**, Instituto Cajal
*3-Dimensional wiring economy in the visual system of *Drosophila melanogaster**
- 5:20 pm Poster Reception
- 7:00 pm Dinner
- 8:00 pm Open Discussion**
Moderator: Claude Desplan
- 9:00 pm Refreshments available at Bob's Pub

Wednesday, March 16th

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 10: Detecting Color**
Chair: Chi-Hon Lee
- 9:00 am **Hiromu Tanimoto**, Max Planck Institute of Neurobiology
Appetitive and aversive visual learning in freely moving Drosophila
- 9:30 am **Nina Vogt**, New York University
Behavioral analysis of color vision in Drosophila
- 9:50 am **Mathias F. Wernet**, Stanford University
Genetic dissection of polarization vision in Drosophila
- 10:10 am Break**
- 10:40 am Session 11: Vision and Complex Behaviors**
Chair: Vivek Jayaraman
- 10:40 am **Martin Heisenberg**, University of Wuerzburg
Visual attention in Drosophila can be steered by sensory cues
- 11:10 am **Tyler Ofstad**, Janelia Farm/HHMI and University of California, San Diego
Visual place learning in Drosophila
- 11:30 am **Benjamin L. de Bivort**, Rowland Institute at Harvard
Developmental stochasticity underlies individual-to-individual idiosyncrasy in Drosophila visual behavior
- 12:00 pm Lunch and Departure (To-go boxes available in servery for those on first shuttle)
- 12:30 pm First shuttle to Dulles
- 1:15 pm Second shuttle to Dulles
- 2:00 pm Last shuttle to Dulles