

**Sunday, March 3<sup>rd</sup>**

- 3:00 pm      Check-in
- 6:00 pm      Reception (*Lobby*)
- 6:30 pm      Dinner
- 7:30 pm      Session 1: Welcome (Organizers) and Opening Talk**  
**Chair: Mandyam Srinivasan**
- 7:40 pm      **Nicholas J. Strausfeld**, University of Arizona  
*Insect vision: Correspondences and genealogies*
- 8:30 pm      Speed Dating! (*Lobby*)
- 9:30 pm      Refreshments available at Bob's Pub

**NOTE:**

Meals are in the **Dining Room**  
Talks are in the **Seminar Room**  
Posters are in the **Lobby**

**Monday, March 4<sup>th</sup>**

- 7:30 am Breakfast (*service ends at 8:45am*)
- 9:00 am Session 2: Vision at the limits**  
**Chair: Jessica Fox**
- 9:00 am **King-Wai Yau**, Johns Hopkins University  
*Activation of visual pigments by light and heat*
- 9:25 am **Mikko Juusola**, University of Sheffield  
*Stochastic adaptive sampling of visual images by Drosophila eye*
- 9:45 am **Emily Baird**, Lund University  
*Visual flight control in complex environments*
- 10:05 am Break
- 10:40 am Session 3: Color and polarization vision**  
**Chair: Tom Clandinin**
- 10:40 am **Perspective talk: Daniel Osorio**, University of Sussex  
*Color, polarization and the evolution of visual communication*
- 11:10 am **Claude Desplan**, New York University  
*Generating neuronal diversity in the Drosophila optic lobes*
- 11:30 am **Chi-Hon Lee**, National Institutes of Health  
*Dendritic development and synaptic specificity of transmedulla neurons in Drosophila*
- 11:50 am **Uwe Homberg**, Philipps-Universität Marburg  
*Visual signalling in the central complex of the desert locust*
- 12:10 pm Lunch (*service ends at 1pm*)

- 2:00 pm**      **Session 4: Multi-sensory integration and memory**  
**Chair: Marion Silies**
- 2:00 pm      **Kei Ito**, University of Tokyo  
*Organization of the secondary visual centers in the Drosophila central brain*
- 2:20 pm      **Shannon B. Olsson**, Max Planck Institute for Chemical Ecology  
*Odor object localization*
- 2:40 pm      **Katherine Nagel**, Harvard Medical School  
*Circuit and synaptic mechanisms underlying encoding of dynamic stimuli in an insect sensory system*
- 3:00 pm      **Daniel Tomsic**, University of Buenos Aires  
*Long-term memory traces in the optic lobe*
- 3:20 pm      Break
- 4:00 pm**      **Session 4 (continued): Multi-sensory integration and memory**
- 4:00 pm      **Johannes D. Seelig**, Janelia Farm Research Campus/HHMI  
*Visuomotor processing in identified neural populations in the Drosophila central brain during walking and flight behavior*
- 4:20 pm**      **Session 5: Panel discussion**  
**Moderators:** Michael Dickinson and Marion Silies  
**Panelists:** King Wai Yau, Daniel Osorio, Claude Desplan, Katherine Nagel
- 5:05 pm      Poster Reception (*with beer, wine and nibbles*)
- 7:00 pm      Dinner
- 8:00 pm**      **Session 6:**  
**Plenary Talk: Tomaso Poggio**, Massachusetts Institute of Technology  
*From behavior to neurons via theory*  
**Chair: Alexander Borst**
- 9:00 pm      Refreshments available at Bob's Pub

**Tuesday, March 5<sup>th</sup>**

- 7:30 am Breakfast (*service ends at 8:45am*)
- 9:00 am Session 7: Feature detection**  
**Chair: Daniel Osorio**
- 9:00 am **Michael Dickinson**, University of Washington  
*Spatial tuning of escape responses in freely flying fruit flies*
- 9:20 am **David C. O'Carroll**, University of Adelaide  
*Insect feature detecting neurons: A model system for studying the neural mechanisms underlying predictive facilitation and selective attention*
- 9:40 am **Karin Nordström**, Uppsala University  
*Feature detection by hoverfly LPTCs*
- 10:00 am Break
- 10:40 am Session 7 (continued): Feature detection**  
**Chair: Shannon Olsson**
- 10:40 am **Mark Frye**, HHMI/University of California, Los Angeles  
*Algorithms and neurons for feature detection during flight in Drosophila*
- 11:00 am **Jessica L. Fox**, University of California, Los Angeles  
*Gaze control during figure-ground discrimination in Drosophila*
- 11:20 am **Armin Bahl**, Max Planck Institute of Neurobiology  
*Object tracking in motion-blind flies*
- 11:40 am Lunch (*service ends at 1pm*)
- 1:00 pm Tour (*optional – meet at reception*)

- 2:00 pm**      **Session 8: Principles of circuit organization**  
**Chair: Nicholas Strausfeld**
- 2:00 pm      **Dario Ringach**, University of California, Los Angeles  
*Natural system analysis applied to insect vision*
- 2:25 pm      **Andrew D. Huberman**, University of California, San Diego  
*Customized direction selective visual circuits that perform specific functions*
- 2:50 pm      **Ian A. Meinertzhagen**, Dalhousie University  
*The connectome of a column in the medulla of *Drosophila melanogaster**
- 3:10 pm      Break
- 3:40 pm**      **Session 8 (continued): Principles of circuit organization**
- 3:40 pm      **Mitya Chklovskii**, Janelia Farm Research Campus/HHMI  
*The connectome of the medulla column in *Drosophila* reveals candidate pathways for a correlation based motion detector*
- 4:00 pm      **Mandyam V. Srinivasan**, University of Queensland  
*Vision in honeybees, and applications to guidance of aerial vehicles*
- 4:20 pm**      **Session 9: Panel discussion**  
**Moderators:** Mikko Juusola and Michael Reiser  
**Panelists:** Dario Ringach, Andrew Huberman, David O'Carroll, Mandyam Srinivasan
- 5:05 pm      Poster Reception (*with beer, wine and nibbles*)
- 7:00 pm      Dinner
- 8:00 pm      Refreshments available at Bob's Pub

**Wednesday, March 6<sup>th</sup>**

- 7:30 am Breakfast (*service ends at 8:45am*)
- 9:00 am Session 10: Mechanisms of motion detection**  
**Chair: David O'Carroll**
- 9:00 am **John C. Tuthill**, Harvard Medical School  
*Functional dissection of the Drosophila lamina*
- 9:20 am **Damon A. Clark**, Yale University  
*The role of third-order correlations in fly and human motion estimation*
- 9:40 am **Marion Silies**, Stanford University  
*Modular use of peripheral input channels directs distinct behavioral responses to motion*
- 10:00 am Break
- 10:30 am Session 10 (continued): Mechanisms of motion detection**  
**Chair: Karin Nordström**
- 10:30 am **Alexander Borst**, Max Planck Institute of Neurobiology  
*Neural circuits for fly visual course control*
- 10:50 am **Rudy Behnia**, New York University  
*Pathways for motion vision in the Drosophila medulla*
- 11:10 am Session 11: Panel discussion**  
**Moderators:** Chi-Hon Lee and Claude Desplan  
**Panelists:** Axel Borst, Mitya Chklovskii, Damon Clark, John Tuthill
- 12:00 pm Lunch and Departure
- 12:30 pm First shuttle to Dulles  
1:30 pm Second shuttle to Dulles  
2:30 pm Last shuttle to Dulles