Sunday, April 22

3:00 pm Check-in

6:00 pm Reception *(Lobby)*

7:00 pm Dinner *(table assignments noted in Dining Room)*

8:00 pm **Welcome and Opening Remarks**

8:05 pm **Keynote Talk**
Malcolm Burrows, University of Cambridge
How studies of insect neural circuits have evolved

9:05 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, April 23

7:30 am Breakfast *(service ends at 8:45am)*

9:00 am **Session 1**
Chair: Gwyneth Card

9:00 am **David Shepherd**, Bangor University
Hemilineage organisation of the adult Drosophila VNS

9:25 am **James W. Truman**, University of Washington
Towards a functional understanding of the cardinal classes of interneurons in the fly VNS

9:50 am **Ellie Heckscher**, University of Chicago
Temporal cohorts of lineage-related neurons perform analogous functions in distinct sensorimotor circuits

10:05 am Break

10:35 am **Session 2**
Chair: Wyatt Korff

10:35 am **Sarah E. Ross**, University of Pittsburgh
The neural circuits of pain, itch and temperature

11:00 am **John Tuthill**, University of Washington
Neural coding of leg proprioception and motor control in Drosophila

11:25 am **Sasha Zill**, Marshall University
Force sensing and motor control in insects

11:50 pm **Tom Matheson**, University of Leicester
Aimed limb movements of insects

12:15 pm Lunch *(service ends at 1pm)*

1:00 pm Tour *(optional – meet at reception)*

2:00 pm **Session 3**
Chair: Einat Couzin-Fuchs

2:00 pm **Julie H. Simpson**, University of California, Santa Barbara
Circuits implementing the grooming motor sequence

2:25 pm **Ansgar Büschges**, University of Cologne
Task specificity of intersegmental and local control in stick insect walking

2:50 pm **Salil S. Bidaye**, University of California, Berkeley
Central neurons for walking control in Drosophila

3:05 pm **Pavan Ramdya**, École Polytechnique Fédérale de Lausanne
Imaging neural activity in the ventral nerve cord of behaving adult Drosophila

3:30 pm Break

4:00 pm **Session 4**
Chair: Roy Ritzmann

4:00 pm **Richard S. Mann**, Columbia University
Neuropeptide modulation of walking behavior

4:25 pm **Eugenia Chiappe**, Champalimaud Foundation
Active visual control of locomotion

4:50 pm **Barry Dickson**, Janelia Research Campus/HHMI
Neurogenetic analysis of locomotor circuits in Drosophila

5:15 pm **Poster Blitz** *(2 minutes / 1 slide each)*

Jan Ache, Janelia Research Campus/HHMI
Sweta Agrawal, University of Washington
Erica Ehrhardt, University of Cologne
Woo Jae Kim, University of Ottawa
Haluk Lacin, Janelia Research Campus/HHMI
Theodore Lindsay, California Institute of Technology
Ryo Minegishi, Janelia Research Campus/HHMI
Umesh Mohan, National Centre for Biological Sciences
Frederic Roemschied, Princeton Neuroscience Institute
Rajyashree Sen, Janelia Research Campus/HHMI
Samuel Whitehead, Cornell University
Mei Zhen, Mt. Sinai Hospital & University of Toronto

5:45 pm Poster Reception

7:15 pm Dinner

8:15 pm **Keynote Talk**
Abdel El Manira, Karolinska Institutet
Functional diversity of interneurons and their circuit assembly in adult zebrafish

9:15 pm Refreshments available at Bob's Pub

Tuesday, April 24

7:30 am Breakfast *(service ends at 8:45am)*

9:00 am **Session 5**
Chair: Julie Simpson

9:00 am **Michael Dickinson**, California Institute of Technology
The organization of the Dipteran flight motor

9:25 am **Jessica L. Fox**, Case Western Reserve University
Haltere mechanosensory input to the fly nervous system

9:50 am **Itai Cohen**, Cornell University
Uncovering the neural architecture for motor control of insect flight

10:15 am Break

10:45 am **Session 6**
Chair: Tom Matheson

10:45 am **Anne C. Von Philipsborn**, Aarhus University
Multifunctional wing motor control for song and flight

11:10 am **David Stern**, Janelia Research Campus/HHMI
Neural changes underlying rapid fly song evolution

11:35 pm **Sten Grillner**, Karolinska Institutet
The conserved structure of the lamprey motor system from forebrain to dorsal nerve cord

12:00 pm Lunch *(service ends at 1pm)*

1:30 pm **Session 7**
Chair: Sarah Ross

1:30 pm **Damon A. Clark**, Yale University
Dynamic activation of sensory neurons in walking Drosophila

1:55 pm **Einat Couzin-Fuchs**, University of Konstanz
Active sensing in insects: Bidirectional interactions between sensory perception and action

2:20 pm **Marta Zlatic**, Janelia Research Campus/HHMI
Mapping the ascending pathways from somatosensory pathways that mediate unconditioned stimuli

2:45 pm **Nino Ramirez**, Seattle Children's Research Institute
The dynamic basis of rhythm generation: Lessons learned from the mammalian respiratory network

3:10 pm Break

3:40 pm **Session 8**
Chair: Sasha Zill

3:40 pm **Shigehiro Namiki**, University of Tokyo
The functional organization of descending sensory-motor pathways in Drosophila

4:05 pm **Gwyneth M. Card**, Janelia Research Campus/HHMI
Mechanisms of descending control

4:30 pm **Marta Moita**, Champalimaud Foundation
Innate freezing behavior, triggered by P9 descending neurons, is plastic

4:45 pm **Rachel I. Wilson**, HHMI/Harvard Medical School
Descending neurons at the intersection of sensory guidance cues and leg steering

5:10 pm Poster Reception

7:00 pm Dinner

8:15 pm **Keynote Talk**
Silvia Arber, University of Basel and Friedrich Miescher Institute for Biomedical Research
Organization and function of descending motor circuits in mice

9:15 pm Refreshments available at Bob's Pub

Wednesday, April 25

7:30 am Breakfast *(service ends at 8:45am)*

9:00 am **Session 9**
Chair: Anne Von Philipsborn

9:00 am **Sanjay Sane**, National Centre for Biological Sciences
Neural encoding and multiplexing of visual and mechanosensory feedback by descending neurons in hawk moths

9:25 am **Kevin C. Daly**, West Virginia University
Flight motor networks modulate primary olfactory processing: A novel corollary discharge circuit in the moth manduca sexta

9:50 am **Frederic Libersat**, Ben Gurion University of the Negev
What can parasitoid wasps teach us about the descending control of locomotion in insects?

10:05 am **Roy E. Ritzmann**, Case Western Reserve University
The central complex provides descending influence on motor control

10:30 am Break

11:00 am **Session 10**
Chair: Kevin Daly

11:00 am **Joshua P. Martin**, Colby College
MantisBot: A robotic platform for modeling interactions between the central complex and ventral nerve cord circuits

11:15 am **Casey Schneider Mizell**, Janelia Research Campus/HHMI
Conserved neural circuit structure across Drosophila larval development revealed by comparative connectomics

11:30 am **Harald F. Hess**, Janelia Research Campus/HHMI
Plans for 3D Electron Microscopy Images of VNC: Quality, timeline, options

11:55 pm **Wyatt Korff**, Janelia Research Campus/HHMI
Putting it all together: Resources for studying the VNC

12:20 pm Closing Remarks / Final Discussion

12:30 pm Lunch and/or Departure *(Lunch service ends at 1pm)*

1:00 pm First shuttle to Dulles
2:00 pm Second shuttle to Dulles
3:00 pm Last shuttle to Dulles