Monday, May 9

3:00 pm Check-in

6:00 pm Reception *(Lobby)*

7:00 pm Dinner

8:00 pm **Session 1: Welcome and Opening Remarks**
Chair: Silvia Arber

8:00 pm **Naoshige Uchida**, Harvard University
The nature of dopamine signals in various behavioral contexts

8:30 pm **Eve Marder**, Brandeis University
Maintaining "good enough" motor performance with highly variable circuit components

9:00 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**

Tuesday, May 10

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

9:00 am **Session 2**
Chair: Salil Bidaye

9:00 am **Jeremy Dasen**, NYU School of Medicine
The ancient origins of circuit elements for land walking and the evolution of locomotor behaviors

9:30 am **Mei Zhen**, Mt. Sinai Hospital/University of Toronto
Operation and orchestration of the reversal motor circuit in C. elegans

10:00 am **Marta Zlatic**, Janelia Research Campus/HHMI
A disinhibition mechanism of sequence generation in Drosophila

10:30 am Break

11:00 am **Session 3**
Chair: Stefanie Hampel

11:00 am **David Kleinfeld**, University of California, San Diego
Brainstem circuits and cortical feedback for orofacial motor actions

11:30 am **Michael A. Long**, NYU Langone Medical Center
How does the brain generate behavioral sequences?

12:00 pm **Karel Svoboda**, Janelia Research Campus/HHMI
Probing frontal cortical networks during motor planning

12:30 pm Lunch *(service ends at 1:00 pm)*

2:00 pm **Session 4**
Chair: Josh Huang

2:00 pm **Abdel El Manira**, Karolinska Institutet
Modular organization of spinal circuits control the speed of locomotion

2:30 pm **Silvia Arber**, University of Basel and FMI
Organization and function of descending motor circuits

3:00 pm **Rui M. Costa**, Champalimaud Neuroscience Programme
Initiating self-paced actions and learning from it

3:30 pm Break

4:00 pm **Session 5**
Chair: Kazuo Kitamura

4:00 pm **Mitsuo Kawato**, ATR Computational Neuroscience Labs
Synchronization of Purkinje cells for controlling degrees of freedom in learning and control

4:30 pm **Megan R. Carey**, Champalimaud Center for the Unknown
Cerebellar contributions to coordinated locomotion in mice

5:00 pm Poster reception

6:30 pm Dinner

8:00 pm **Session 6**
Chair: Rui Costa

8:00 pm **Okihide Hikosaka**, National Eye Institute/NIH
Parallel basal ganglia circuits for choosing good objects

8:30 pm **Jose M. Carmena**, University of California, Berkeley
Large-scale neural circuit dynamics during neuroprosthetic skill learning

9:00 pm Refreshments available at Bob's Pub

Wednesday, May 11

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

9:00 am **Session 7**
Chair: Helen Lai

9:00 am **Samuel L. Pfaff**, *HHMI/Salk Institute for Biological Studies*
Satb2 controls spinal circuit assembly and is required for the execution of sensory-evoked motor behavior

9:30 am **Ole Kiehn**, Karolinska Institutet
Start and stop: A matter of excitation

10:00 am **Francesco Lacquaniti**, University of Rome Tor Vergata
Modular control of human locomotion

10:30 am Break

11:00 am **Session 8**
Chair: Akinao Nose

11:00 am **Fan Wang**, Duke University
Imaging and manipulating motor cortical ensembles encoding a skilled motor memory

11:30 am **Adam Hantman**, Janelia Research Campus/HHMI
Role of the cortico-cerebellar system in motor control

12:00 pm **Kathleen Cullen**, McGill University
Neural correlates of sensory prediction errors in monkeys: Evidence for internal models of voluntary self-motion in the cerebellum

12:30 pm Lunch *(service ends at 1:00 pm)*

1:15 pm Tour *(optional - meet at reception)*

2:00 pm **Session 9**
Chair: Till Bockemühl

2:00 pm **Thomas Jessell**, HHMI/Columbia University
Neural circuits for adaptive motor behavior

2:30 pm **Martyn Goulding**, Salk Institute for Biological Studies
Sensorimotor control: the contribution of inhibition to touch and movement

3:00 pm **Lena Ting**, Emory University
Neuromechanical principles underlying sensorimotor modularity

3:30 pm Break

4:00 pm **Session 10**
Chair: Graziana Gatto

4:00 pm **Gwyneth M. Card**, Janelia Research Campus/HHMI
TBD

4:30 pm **Ansgar Büschges**, University of Cologne
Neural control of locomotion - insights from studying insect walking

5:00 pm **Richard S. Mann**, Columbia University
Genetic dissection of locomotion in Drosophila

5:30 pm Poster Reception

7:00 pm Dinner

8:00 pm **Session 11**
Chair: Ansgar Büschges

8:00 pm **Edgar Garcia-Rill**, University of Arkansas for Medical Sciences
Arousal and motor control

8:30 pm **Sten Grillner**, Karolinska Institutet
Conservation of the basal ganglia as a mechanism for action selection

9:00 pm Refreshments available at Bob's Pub

Thursday, May 12

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

9:00 am **Session 12**
Chair: Carmen Smarandache-Wellmann

9:00 am **Eugenia Chiappe**, Champalimaud Foundation
Visual neurons in action: Coupling locomotion to visual motion

9:30 am **Hans Straka**, Ludwig-Maximilians-Universität München
Impact of locomotor efference copies on sensory-motor transformation underlying gaze control

10:00 am Break

10:30 am **Session 13**
Chair: Barry Dickson

10:30 am **Roy E. Ritzmann**, Case Western Reserve University
Central complex as a sensorimotor center for context dependent movement

11:00 am **Florian Engert**, Harvard University
Distributed neural architectures for binocular visuomotor transformations in the larval zebrafish

11:30 am Closing remarks

11:35 am Lunch and Departure

12:00 pm First shuttle to Dulles

1:00 pm Second shuttle to Dulles

2:00 pm Last shuttle to Dulles