

## The Brain Conferences

### CIRCUITS FOR MOVEMENT

16 – 19 June 2024

Rungstedgaard, Denmark

#### PROGRAMME

Sunday, June 16 2024	
From 14:00	<b>Arrival and registration</b>
14:50-15:00	<i>Welcome address from the Conference Chairs</i> <b>Silvia Arber, Martyn Goulding and Ole Kiehn</b>
<i>Afternoon Session Moderator: Ole Kiehn</i>	
15:00-15:40	<b>Abdel ElManira</b> Circuit modules for locomotor speed control
15:40-16:20	<b>Marta Bagnall</b> Longitudinal spinal circuits for motor control
16:20-16:50	Coffee Break
16:50-17.30	<b>Martyn Goulding</b> Moving beyond the CPG: sensory and supraspinal pathways for integrated motor control
17:30-17:45	<b>Minoru Koyama</b> (University of Toronto): Long-range synaptic connectivity between spinal V2a neurons and axial motoneurons revealed by single-cell precision optogenetics assisted circuit mapping in larval zebrafish
17:45-18.00	<b>Ryan Kast</b> (MIT): Differential Roles of Zona Incerta Neuron Subtypes in Arbitrating Action Under Conflict
18:00-18:15	<b>Sophie Grutzner</b> (UCSF): Navigating Dreams: the representation of locomotion in motor thalamus during REM sleep
18:30-20:30	Welcome Drink & Dinner

**Monday, 17 June 2024**

*Morning Session Moderator: Rui Costa*

09:00-09:40	<b>Eiman Azim</b> Cerebellar input and output circuits for dexterous movement
09:40-10:20	<b>Abigail Person</b> Towards an algorithm for cerebellar control of movement
10:20-10:50	Group Picture & Coffee Break
10:50-11:30	<b>Ole Kiehn</b> Linking brainstem motor command pathways to restoration of movement in Parkinsonism
11:30-12:10	<b>Alexandra Nelson</b> Basal Ganglia Microcircuits Underlying Involuntary Movements
12:10-12:25	<b>Joaquim Alves da Silva (Champalimaud):</b> Movement initiation reveals a hyperactive direct pathway in a mouse model of dystonia
12:25-14:00	Lunch

*Afternoon Session Moderator: Silvia Arber*

14:30-15:10	<b>Aya Takeoka</b> Spinal circuit plasticity for movement adaptation
15:10-15:25	<b>Kazuhiko Seki (National Institute of Neuroscience, NCNP) :</b> Beyond the cerebral cortex: A spinal reflex module for regulating muscle output in primate hand movements.
15:25-15:45	<b>Elzbieta Jankowska/Ingela Hammar (University of Goeteborg):</b> Setting up the input to the spinal cord
15:45-16:00	Coffee break
16:00-18:00	<b>Poster Session I</b>
18:30-19:30	<b>Plenary Lecture Nirao Shah</b> Neural circuit architecture for a social behavior

19:30-21:30	Dinner
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Tuesday, 18 June 2024	
<i>Morning Session Moderator</i> <b>Bence Ölveczky</b>	
09:00-09:40	<b>Silvia Arber</b> Licensing actions at the intersection between basal ganglia and brainstem
09:40-10:20	<b>Rui Costa</b> Distinct basal ganglia circuits mediate different behaviors
10:20-10:50	Coffee Break
10:50-11:30	<b>Bernardo Sabatini</b> Basal ganglia circuits for action selection and evaluation
11:30-12:10	<b>Sten Grillner</b> The logics of networks in motion – in the light of evolution
12:10-12:25	<b>Shreyas Suryanarayana</b> (Duke): Evo-devo diversification of cortical output channels
12:25-12:40	<b>Michelle Sánchez Rivera</b> (University of Edinburgh): Corticospinal Neurons in the Selective Execution of Learned Actions
12:40-14:00	Lunch Break
<i>Afternoon Session Moderator:</i> <b>Ansgar Bueschges</b>	
14:30-14:45	<b>John Foxe, Chief Editor EJM</b>
14:45-15:00	<b>Chris Dallmann</b> (University of Würzburg): Descending pathways that control the initiation, speed, and halting of locomotion in <i>Drosophila</i>
15:00-15:15	<b>Helen Yang</b> (Harvard): Fine-grained descending control of steering in walking <i>Drosophila</i>

15:15-15:30	<b>Stephen Huston</b> (Columbia ): Fly neck motor neurons neurons generate convergent movements through proprioceptive sculpting
15:30-16:00	Coffee Break
16:00-18:00	<b>Poster Session II</b>
18:30-19:10	<b>Andreas Horn</b> Causal mapping: From connectomic deep brain stimulation toward the 'Human Dysfuncome'
19:30-21:00	Dinner

**Wednesday, June 19 2024**

<i>Morning Session Moderator: Alexandra Nelson</i>	
09:00-09:40	<b>Bence Ölveczky</b> Neural circuits underlying learned motor sequences
09:40-10:20	<b>Fan Wang</b> Circuits for rhythmic movements
10:20-10:50	Coffee Break
10:50-11:30	<b>Ansgar Bueschges</b> Controlling multisegmented limbs for locomotion – Insights from studying insects
11:30-12.10	<b>John Tuthill</b> Synaptic architecture of leg and wing motor control networks in Drosophila
12:15-13:30	Lunch
<i>Afternoon Session Moderator: Martyn Goulding</i>	
13:45-14:25	<b>Gwyneth Card</b> Cracking circuits with connectomes: a reverse neuroethology perspective
14:25-15:05	<b>Tiago Branco</b> A movement-driven subgoal strategy for computing efficient escape routes
15:05-15:15	Closing Remarks and Poster Awards

15:15-15:30	Coffee Break
15:30-19:00	Social Event
19:30-22:30	Gala Dinner

<b>Thursday, 20 June 2024</b>
Breakfast & departure