



Sensorimotor circuits for limb control



Limb movements, such as those required for locomotion and dexterous behaviors, are essential for our daily lives. On any given day we may walk, run, drink coffee, operate a smartphone, type on a keyboard, exercise, or even play a musical instrument. These behaviors require exquisite control and coordination of dozens to hundreds of muscles, which ultimately can only be recruited by motor neurons in the ventral spinal cord. Motor neuron activity is regulated by diverse neural pathways located locally in the spinal cord as well as in supraspinal areas such as the cortex, basal ganglia, cerebellum, midbrain and brainstem. Equally critical to coordinated movements are sensory systems that are continuously involved in feedback control. Injury or disease can cause debilitating movement deficits as diverse as the motor or sensory circuits they disrupt. This workshop brings together world-class researchers whose work is revealing how motor and sensory systems in the brain, spinal cord and periphery control precise patterns of muscle activity during behaviors, and how damaged sensorimotor circuits are reorganized or repaired to achieve motor recovery.

Three days will be filled with talks, formal and informal discussions, poster presentations and sightseeing in the local Okinawa area. We encourage applications from graduate students, postdoctoral fellows and faculty in any related field. We will cover travel and accommodation fees for 30 accepted attendees, based on submitted background and motivation statements. We will inform all applicants of the selection results by April 1st, 2020.

Important Dates

- Dates: September 15-18, 2020
- Begin Accepting Applications: December 17, 2019
- Application Deadline: March 1, 2020
- Notification of Application Results: April 1, 2020
- Participants arrive in Okinawa: September 14, 2020
- Participants depart Okinawa: September 19, 2020

Location

Okinawa Institute of Science and Technology (OIST) Graduate University, Okinawa, Japan

Invited speakers

- Eiman Azim (Salk, USA)
- Megan Carey (Champalimaud Foundation, Portugal)
- Rui Costa (Columbia University, USA)
- Martyn Goulding (Salk, USA)
- Noriyuki Higo (AIST, Japan)
- Tadashi Isa (Kyoto University, Japan)
- Ole Kiehn (University of Copenhagen, Denmark)

- John Martin (CUNY, USA)
- Masanori Matsuzaki (University of Tokyo, Japan)
- Yukio Nishimura (Tokyo Metropolitan of Medical Science, Japan)
- Abigail Person (University of Colorado, USA)
- Samuel Pfaff (Salk, USA)
- Kazuhiko Seki (National Institute of Neuroscience, Japan)
- Aya Takeoka (NERF/KU Leuven, Belgium)
- Masahiko Takada (Kyoto University, Japan)
- Andrew Pruszynski (Western University, Canada)

Organizers

- Yutaka Yoshida (Burke Neurological Institute/Weill Cornell Medicine and OIST)
- Eiman Azim (Salk)
- Rui Costa (Columbia University)
- Tadashi Isa (Kyoto University)
- Marylka Yoe Uusisaari (OIST)

For further information please contact Yutaka.Yoshida@oist.jp

OIST will handle the logistics of accommodation, travel, and meals for all workshop participants. OIST will also help with arranging visas when necessary.

****OIST is deeply committed to the advancement of women in science, in Japan and worldwide. Women are strongly encouraged to apply.****