

**FENS - CHEN INSTITUTE - NEUROLÉMAN SUMMER SCHOOL SERIES  
ON BRAIN DYNAMICS IN HEALTH AND DISEASE**

**“MOTOR CONTROL: FROM THOUGHT TO ACTION”**

**2 - 8 July 2023**

EPFL, Lausanne, Switzerland

**Scientific Chairs:** Brian McCabe & Carl Petersen

**Summer School Series Committee:** Camilla Bellone, Alan Carleton, Christian Lüscher, Manuel Mameli (chair), Brian McCabe, Carl Petersen, Carmen Sandi and Ron Stoop

## Programme

### Sunday 2<sup>nd</sup> July

Registration

18:00 Introduction & welcome dinner

### Monday 3<sup>rd</sup> July

09:00 - 12:00 **Brian McCabe**  
EPFL, Switzerland  
*Shared features of motor systems*

*Break*

Interactive session

12:00 - 14:00 *Lunch*

- 14:00 - 17:00     **Ariel Levine**  
NIH, USA  
*Spinal circuits for motor control*
- Break*
- Interactive session
- 17:00             Dinner & student presentations – Part 1

**Tuesday 4<sup>th</sup> July**

- 09:00 - 12:00     **Pavan Ramdya**  
EPFL, Switzerland  
*Approaches for reverse engineering insect action selection  
and limb control*
- Break*
- Interactive session
- 12:00 - 14:00     *Lunch*
- 14:00 - 17:00     **Silvia Arber**  
University of Basel, Switzerland  
*The brainstem as a central player for movement control*
- Break*
- Interactive session
- 17:00             Dinner & student presentations – Part 2

**Wednesday 5<sup>th</sup> July**

09:00 - 12:00     **Mackenzie Mathis**  
EPFL, Switzerland  
*Towards understanding dynamics in sensorimotor learning in  
biological and artificial systems*

*Break*

Interactive session

12:00 - 14:00     *Lunch*

14:00 - 17:00     **Daniel Huber**  
University of Geneva, Switzerland  
*Cortical representations of goal directed action*

*Break*

Interactive session

17:00             Dinner & student presentations – Part 3

**Thursday 6<sup>th</sup> July**

09:00 - 12:00     **Cristin Welle**  
University of Colorado, USA  
*Neuromodulation to drive plasticity and motor learning*

*Break*

Interactive session

12:00 - 14:00     *Lunch*

- 14:00 - 17:00    Visit to **NeuroRestore**  
Lausanne University Hospital (CHUV)  
*Gregoire Courtine & Jocelyne Bloch's Center for treating  
spinal cord injury*
- 17:00            *Dinner & social programme*

**Friday 7<sup>th</sup> July**

- 09:00 - 12:00    **Carl Petersen**  
EPFL, Switzerland  
*Neuronal circuits for goal-directed behavior*
- Break*
- Interactive session
- 12:00 - 14:00    *Lunch*
- 14:00 - 17:00    **Claire Wyart**  
INSERM & ICM, France  
*Identifying long term dynamics in motor patterns*
- Break*
- Interactive session
- 17:00            Wrap-up & farewell party

**Saturday 8<sup>th</sup> July**

Breakfast and departure