

Inserm Workshop 276

**Nouvelles méthodes d'apprentissage automatique pour l'analyse
comportementale des animaux et des humains**
New machine learning methods for animal and human behavioral analysis

16-18 Octobre 2023 / October 16-18, 2023 ■ Bordeaux, France

Lundi 16 Octobre 2023 ■ Monday October, 16 2023

15:30 - 16:00	Reception of participants
16:00 - 16:30	General introduction Nicolas Gervasi (Collège de France, Paris, France)
SESSION I	Data Acquisition in an openscience world
16:30 - 17:15	The Souris City environment Philippe Faure (ESPCI, Paris, France)
17:15 - 18:00	Computational tools for exploiting physiological signals and videos with applications in neuroscience and pre-clinical research Romain Fayat (ENS, Paris, France)
18:00 - 18:45	OpenBehavior Alexxai Kravitz (Washington University, Saint Louis, USA)
18:45 - 19:30	Round Table 1
19:30 - 20:15	Cocktail - Fast presentation
20:15	Dinner

Mardi 17 Octobre 2023 ■ Monday October, 17 2023

06:30 - 08:30	Breakfast
SESSION II	Use of machine learning methods to analyze detailed behavior at the individual scale
08:30 - 09:15	Deeplabcut, An open-source, integrated system for tracking and closed-loop behavioral experiments. Alexander Mathis (EPFL, Lausanne, Switzerland)
09:15 - 10:00	Assessment of repetitive behaviors in human patients and mice Lizbeth Mondragon (ICM, Paris, France)
10:00 - 10:30	Coffee break
10:30 - 11:15	Systems neuroscience of natural behavior in rodents Sandeep Robert Datta (Harvard, USA)
11:15 - 12:00	Left Habenular Activity Attenuates Fear Responses in Larval Zebrafish Elim Hong (IBPS, Paris, France)
12:00 - 14:00	Lunch

SESSION III	Use of machine learning methods to analyze social interaction and groups
14:00 - 14:45	a Novel Methodological Approach to Place Mouse Ultrasonic Vocalizations in Their Behavioral Contexts. Elodie Ey (IGBMC, Strasbourg, France)
14:45 - 15:30	Tracking all individuals in small or large collectives of unmarked animals. Gonzalo Polavieja (Champalimaud, Lisbon, Portugal)
15:30 - 16:00	Coffee Break
16:00 - 16:45	VTA dopamine neuron activity encodes social interaction and promotes reinforcement learning through social prediction error Camilla Bellone (Université de Genève, Genève, Switzerland)
16:45 - 17:30	Round Table 2
20:00	Dinner

Mercredi 18 Octobre 2023 ■ **Wednesday October, 18 2023**

06:30 - 08:30	Breakfast
SESSION IV	From big data to behavior modeling
08:30 - 09:15	Naturalizing psychopathology - towards a quantitative real-world psychiatry. Juha Lahnakoski (Institute for Neuroscience and Medicine, Jülich, Germany)
09:15 - 10:00	Deep neural networks in psychiatry Georgia Koppe (Central Institute of Mental Health, Mannheim, Germany)
10:00 - 10:30	Coffee Break
10:30 - 11:15	TBA
11:15 - 12:00	Round Table 3
12:00 - 14:00	Lunch
14:00	Departure