| GMT+2   | GMT+1    | GMT+9   | GMT-4      | Title BRAIN-PIL   |
|---------|----------|---------|------------|---|
| (Paris) | (London) | (Tokyo) | (New York) | ◆   EEE   |
| 11:00   | 10:00    | 18:00   | 5:00       | Welcome organizers  |
|         |          |         |            | David Filliat (ENSTA), Tansu Celikel (Donders Inst.), Natalia Díaz-Rodríguez (ENSTA), Mohsen Kaboli (BMW), Pablo      |
|         |          |         |            | Lanillos (Donders Inst.)  |
| 11:30   | 10:30    | 18:30   | 5:30       | Jun Tani, OIST, Japan - Cognitive Neurorobotics Study Using Predictive Coding and Active Inference Framework          |
| 12:00   | 11:00    | 19:00   | 6:00       | Joni Dambre, Ghent University, Belgium - Integrating biological insights into practical AI: a pragmatic viewpoint.    |
| 12:30   | 11:30    | 19:30   | 6:30       | Interactive + Contribution 1, 2 and 9   |
| 13:00   | 12:00    | 20:00   | 7:00       | Manuel Lopes, IST, Portugal   |
| 13:30   | 12:30    | 20:30   | 7:30       | Auke Ijspeert, EPFL, Switzerland - Controlling robots' locomotion with control architectures inspired from the spinal |
|         |          |         |            | cord circuits of vertebrate animals   |
| 14:00   | 13:00    | 21:00   | 8:00       | Interactive + Contribution 3 and 4  |
| 14:30   | 13:30    | 21:30   | 8:30       | Mehdi Khamassi, Sorbonne Univ., France - Hippocampal replay through the lenses of reinforcement learning              |
| 15:00   | 14:00    | 22:00   | 9:00       | Matthew Botvinick, DeepMind / UCL, UK - Dopamine function through the lens of distributional RL                       |
| 15:30   | 14:30    | 22:30   | 9:30       | Interactive + Contribution 5 and 6  |
| 16:00   | 15:00    | 23:00   | 10:00      | Fumiya lida, Cambridge Univ., UK - Embodied cognition in soft robotics: growing brain and soft deformable body        |
| 16:30   | 15:30    | 23:30   | 10:30      | Ravinder Dahiya, Glasgow Univ., UK - Neural Transistors for computational Electronic Skin                             |
| 17:00   | 16:00    | 0:00    | 11:30      | Interactive + Contribution 7 and 8  |
| 17:30   | 16:30    | 0:30    | 12:00      | Poster session  |
| 18:00   | 17:00    | 1:00    | 12:30      | End   |

## **Contributions**

- 1. Alex Pitti, Mathias Quoy, Sofiane Boucenna and Catherine Lavandier. Complementary Working Memories using Free-Energy Optimization for Learning Features and Structure in Sequences
- 2. Zhenduo Zhai and Ismail Akturk. Exploiting Refractory Period for Functional Multiplexing and Short-Term Memory in Spiking Neural Networks
- 3. Mohamed Baioumy, Matías Mattamala and Nick Hawes. Variational Inference for Predictive and Reactive Controllers
- 4. Elnaz Soleimani, Abdelghani Chibani and Ghazaleh Khodabandehlou. Robust Semi-Supervised Adversarial Subject-Level Transfer Learning for Sensor-Based Human Activity Recognition
- 5. Cansu Sancaktar, Guillermo Oliver, Pablo Lanillos. Deep Active Inference for robot body perception and action
- 6. Adrien Bennetot, Vicky Charisi and Natalia Díaz-Rodríguez. Should artificial agents ask for help in human-robot collaborative problem-solving?
- 7. Zhicong Xian and Zhicong Xian. Making Sense of Touch: Unsupervised Shapelet Learning in Bag-of-words Sense
- 8. Ali Alqallaf and Gerardo Aragon-Camarasa. A Pilot Investigation of Robotic Self-Awareness
- 9. M. Yunus Seker, Erhan Oztop, Mete Tuluhan Akbulut, Yukie Nagai, Minoru Asada, and Emre Ugur. Towards a Mirror Neuron System via Dual Channel Conditional Neural Movement Primitives