

## PROGRAM 2025

### Annual Meeting of the NeuroMod Institute, Antibes.

#### Tuesday July 8

<b>9:15 - 10:00</b>	<b>Registration and welcome</b>
<b>10:00 - 10:15</b>	<b>Opening and Introduction</b>
<b>10:15 - 11:00</b>	<b>Keynote lecture:</b> Operator-Theoretic Perspectives on Data-Driven Modeling of Dynamical Systems. <i>Vladimir KOSTIC (Istituto Italiano di Tecnologia, Genova, Italy).</i>
11:00 - 11:25	High-density MEA analysis of neural circuit maturation and plasticity in human brain organoids. <i>Michele BERTACCHI (IBV), Gregorio REBECCHI (LJAD).</i>
11:25 - 11:50	How does lateral inhibition shape receptive fields in the retina? The case of anticipating a moving bar. <i>Laura PIOVANO (Centre Inria d'Université Côte d'Azur).</i>
11:50 - 12:15	Theta activity supports landmark-based correction of naturalistic human path integration. <i>Clément NAVEILHAN (LAMHESS).</i>
<b>12:15 - 14:00</b>	<b>Lunch</b>
14:00 - 14:25	"Broadband" cortical neuronal ensembles. <i>Michele GIUGLIANO (University of Modena &amp; Reggio Emilia).</i>
14:25 - 14:50	Computational and Neurobiological Modeling of Structure-Function Coupling in Different Consciousness States. <i>Rodrigo COFRE (Centre Inria d'Université Côte d'Azur).</i>
14:50 - 15:15	Lexical Retrieval in Diglossic Aphasia: Naming Accuracy for Cognates and Non-Cognates in Modern Standard Arabic and Egyptian Colloquial Arabic. <i>Amena ELKHOLAY (University of Groningen).</i>
<b>15:15 - 16:45</b>	<b>Poster session (discussions with coffee)</b>
	- Challenging behaviors in children with nonverbal Autism: a guide for designing a cutaneous device for biomarker recording. <i>Olivia VIDAL ZABORSKI (CoBTeK)</i>
	- APP-derived AETA peptide modulates brain network activity. <i>Benjamin AZOULAY, Martyna NABIALZCYK (IPMC).</i>
	- Modeling of the stimulation artifact and brain evoked potential elicited by direct stimulation. <i>Emeline MANKA (Centre Inria d'Université Côte d'Azur).</i>
	- Eye-Tracking based optimization. <i>Ambre MOUNIE (i3S)</i>

- Graph theory in disorders of consciousness: Toward multimodal integration. *Arturo CABRERA-VAZQUEZ (Université Grenoble-Alpes)*.
- ABBA+BraiAN, a novel open-source pipeline for 2D to 3D whole-brain mapping. *Carlo CASTOLDI (IPMC)*.
- Neurocognitive dynamic of orientation using visuo-spatial information from a 2D map to the 3D environment. *Maud SAULAY-CARRET (LAMHESS)*.
- The role of GABAergic neurons in the propagation of cortical spreading depolarization. *Martina SIMONTI (IPMC)*.
- Anatomical mapping of ventral midline thalamus connectivity in memory and emotion processing. *Maddalena PIERONI (IPMC)*.
- Focus of Attention: A sensory motor task for energy efficient Neuro-Inspired AI. *Matthis Dallain (LEAT)*.
- A mathematical study of the limit of fiber tractography. *Samuel DESLAURIERS-GAUTHIER, Romain VELTZ (Centre Inria d'Université Côte d'Azur)*.

**16:45 - 17:30**

**Keynote lecture:** What are Neural Language Models the Model of? Epistemological and Theoretical Perspectives on LLMs. *Juan-Luis GASTALDI (ETH Zurich)*.

**20:00**

**Evening Reception**

## Wednesday July 9

**7:30 - 9:00**

**Breakfast**

**9:00 - 14:45**

**Thematic Symposium: Neuro-Ageing**

9:00 - 9:25

Post-transcriptional regulatory mechanisms in the aging brain. *Florence BESSE (IBV)*.

9:25 - 9:50

Activity-Dependent Neuroprotective Protein (ADNP) sustains microglial physiological functions: Mechanistic insights and implications for neurodegeneration. *Lucia SILVERA-CARRASCO (University of Seville Medical School)*.

9:50 - 10:15

ER-PM junctional complex modulating interfering peptides provide neuroprotection from ROS-dependent neuronal injury in epilepsy and aging. *Ghiriraj SAHU (Indian Institute of Science, Bangalore, India)*.

10:15 - 10:40

Research project: How do we adapt to ageing? Focus on vertical sensorimotor adaptation. *Clémence BONNET (LAMHESS)*.

**10:40 - 11:00**

**Coffee break**

11:00 - 11:25	Personalized program for preventing loss of autonomy in the elderly. <i>Lyne DAUMAS (LAMHESS)</i>
11:25 - 11:50	Neurocognitive disorders in clinical practice: what do patients and clinicians need? <i>Guillaume SACCO (IPMC, CHU de Nice)</i> .
11:50 - 12:15	Centenarians and oldest-olds in Liguria – COOL: a multidisciplinary approach to investigate the genetic determinants of cognitive health in the oldest population. <i>Emilio Di Maria (University of Genoa and Galliera Hospital)</i> .
<b>12:15 - 14:00</b>	<b>Lunch</b>
<b>14:00 - 14:45</b>	<b>Keynote lecture:</b> Decoding apathy: Can new technologies, neuroscience and data science help address clinical challenges in Neurocognitive Disorders? <i>Valeria MANERA (CoBTeK)</i> .
14:45 - 15:10	Weaving body and mind: towards experiential and embodied organizational learning. <i>Kübra SIMSEK (Entreprise WDHB &amp; RITM, Université Paris Saclay)</i> .
15:10 - 15:35	A biologically plausible decision-making model based on interacting neural populations. <i>Emre BASPINAR (Centre Inria d'Université Côte d'Azur)</i> .
<b>15:35 - 17:00</b>	<p><b>Poster session (discussions with coffee)</b></p> <ul style="list-style-type: none"> <li>- Early and progressive changes in network activity can be used to predict seizures in a genetic mouse model of developmental and epileptic encephalopathy. <i>Fabrizio CAPITANO (IPMC)</i>.</li> <li>- Lost in Effort: Lexical Decision Patterns in Apathy. <i>Mar CORDERO-RULL (CoBTeK)</i>.</li> <li>- Controlling Memory Failures in Alzheimer's Disease Using Real Neuronal Data. <i>Rafael PINHEIRO (ciTechCare, Polytechnic University of Leiria, Portugal)</i>.</li> <li>- Spikes and curves in the lexicon: modeling visual-phonological congruence as a proxy to iconicity. <i>Giulio MASSARI (BCL)</i>.</li> <li>- Investigating the Neural Mechanisms of Social Fear Extinction in Mice. <i>Linda Maria REQUIE (IPMC)</i>.</li> <li>- Getting Lost with Age: How the Hippocampus and Nucleus Accumbens Shape Landmark Navigation. <i>Larissa YUGAY (IPMC)</i>.</li> <li>- Hippocampus – nucleus accumbens circuitry at the basis of appetitive memory deficits in aging. <i>Aurore RIBERA (IPMC)</i>.</li> <li>- Motor Behavior as a Window into Apathy in Minor Neurocognitive Disorder: Toward a Reliable Clinical Support System. <i>Gianmaria MANCIOPPI (CoBTeK)</i>.</li> <li>- GPU tractography: What can we learn from half a trillion streamlines? <i>Yanis AESCHLIMANN (Centre Inria d'Université Côte d'Azur)</i>.</li> <li>- Brain-inspired unsupervised multimodal learning method for fast motion measurement by self-mixing interferometry. <i>Ayman Hajjaoui (LEAT)</i>.</li> <li>- A Finite Volume Framework for Probabilistic Tractography: Solving the Fiber Transport PDE. <i>Harshit HARSHIT (Centre Inria d'Université Côte d'Azur)</i>.</li> </ul>