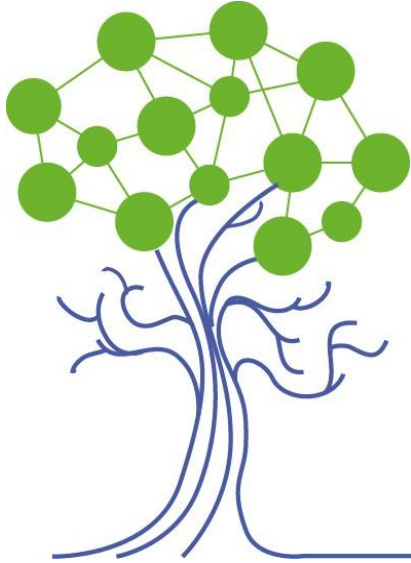




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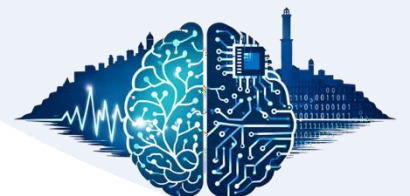


10th International school of Neuroengineering "Massimo Grattarola"

***Bridge the Gap: Multiscale Approaches in
Neurodevelopmental Disorders***

Organized by
Monica Frega, Gabriele Arnulfo
and Neuroengineering Genoa Group
University of Genoa, Genoa, Italy

PhD Bioengineering
and Robotics



NEUROENGINEERING
— GENOA GROUP —



9:00 – 9:45 *Registration*

9:45 – 10:00 Welcome from the Organizers and greetings from Prof. Rocco Antonucci Municipal Councilor of the City of Camogli

Session 1. The human starting point (Chair: Prof. Lino Nobili)

10:15 – 11:00 Epilepsy and epileptic encephalopathies: from pathophysiology to clinical practice

Renzo Guerrini (University of Florence, Florence, Italy)

11:00 – 11:30 Coffee break

11:30 – 12:00 The quest for precision medicine in rare neurodevelopmental disorders

Alberto Danieli (IRCCS E. Medea, Conegliano, Italy)

12:00 – 12:30 Molecular strategies for the functional rescue of haploinsufficiency in neurodevelopmental disorders.

Federico Zara (IRCCS G. Gaslini, Genoa, Italy)

12:30 – 13:00 Round-table

13:00 – 14:15 Lunch break & Poster session

Session 2. In vitro models (Chair: Prof. Sergio Martinoia)

14:15 – 15:00 Multimodal mapping of neuronal network activity and transcriptomic identifies convergent and divergent neuronal trajectories in neurodevelopmental disorders

Nael Nadif Kasri (Radboud Umc, Nijmegen, the Netherlands)

15:00 – 15:30 Bridging the Gap In Vitro: Electrophysiology and Computational Modeling in Human Neurodevelopmental Disorders

Michele Giugliano (University of Modena and Reggio Emilia, Italy)

15:30 – 16:00 Coffee break

16:00 – 16:30 Advances in Human Brain Modeling: 2D and 3D Platforms for the Study of Neurodevelopmental Disorders

Bruno Sterlini (University of Genoa, Genoa, Italy)

16:30 – 17:00 The Translational Journey of a Small-Molecule: from in vitro models to patients

Annalisa Savardi (IAMA Therapeutics, Genoa, Italy)

17:00 – 17:30 Round-table

19:30 – 22:30 *Dinner*

Session 3. In vivo models (Chair: Prof. ssa Michela Chiappalone)

10:15 – 11:00 Neurobiology of the Social Brain

Francesco Papaleo (Italian Institute of Technology, Genoa, Italy)

11:00 – 11:30 Coffee break

11:30 – 12:00 The epilepsy gene TBC1D24: from pathogenic mutations to novel therapeutic strategies

Anna Fassio (University of Genoa, Genoa, Italy)

12:00 – 12:30 Building the Hippocampal Network: Early Dynamics and Their Disruption in Autism

Michel Picardo (INMED, Marseille, France)

12:30 – 13:00 Round-table

13:00 – 14:15 Lunch break & Poster session

Session 4. Digital twins (Chair: Prof. Paolo Massobrio)

14:15 – 15:00 RNN-based digital twins of brain activity for longitudinal trajectory mapping

Maurizio Mattia (Sapienza University of Rome, Rome, Italy)

15:00 – 15:30 Simple models and expressive features to understand population dynamics

Anna Levina (University of Tuebingen, Tuebingen, Germany)

15:30 – 16:00 Coffee break

16:00 – 16:30 Unveiling the neural origins of emergent network activity using biophysical modeling and machine learning

Nina Doorn (University of Twente, Enschede, the Netherlands)

16:30 – 17:00 Virtual Brain Twins: Towards Personalized Treatment Decisions in Schizophrenia

Giacomo Preti (Aix-Marseille University, Marseille, France)

17:00 – 17:30 Round-table

19:30 – 22:30 *Dinner*

WEDNESDAY JUNE 10th, 2026 | DAY 3

Hands-on session

09:00 – 12:00 *The Virtual Brain*

Giacomo Preti (Aix-Marseille University, Marseille, France)

09:00 – 12:00 *The digital network twin*

Nina Doorn (University of Twente, Enschede, the Netherlands)

10:15 – 10:30 *Morning Coffee Break*

Best Poster Award

12:30 – 13 *Winner Announcement and Greetings*

Gabriele Arnulfo, Monica Frega (University of Genova, Genova, Italy)

13:15 -14:30 *Farewell Lunch*

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