• INCTN Conference • 2025

PROGRAM

MONDAY, SEPTEMBER 22, 2025

Invited Talk
09:30-10:00 **Ambra Ferrari** | *University of Trento, Italy*
How the brain binds information across the senses.

Invited Talk
10:00-10:30 **Pietro Avanzini** | *CNR, Istituto di Neuroscienze, Parma, Italy*

10:30-11:30 **Poster Session I with Coffee Break**

Contributed Talk
11:30-11:45 **Silvia Gini** | *University of Trento – Italian Institute of Technoloty, Italy*
Brain state shapes the intrinsic sender-to-receiver architecture of the mouse brain.

Contributed Talk
11:45-12:00 **Danilo Benozzo** | *University of Pavia, Italy*
Linking time-lagged functional dynamics to structural constraints in resting-state fMRI.

Contributed Talk
12:00-12:15 **Giacomo Barzon** | *Padova Neuroscience Center, Italy*
Information Coding in Excitatory–Inhibitory populations: The Roles of Balance and Plasticity

Contributed Talk
12:15-12:30 **Marco Celotto** | *Massachussetts Institute of Technology, USA*
Astrocyte-norepinephrine interactions tune cortical neuronal encoding to guide behavioral adaptation.

12:30-14:00 **Lunch**

Invited Talk

14:00-14:30 **Alessio Fracasso** | *University of Padova, Italy*
Modelling cortical oculo-motor planning and execution at high-field, a 7T approach.

Invited Talk

14:30-15:00 **Alberto Testolin** | *University of Padova, Italy*
Modeling numerosity perception with generative neural networks.

Invited Talk

15:00-15:30 **Eleonora Maggioni** | *Politecnico di Milano, Italy*
Integrating electrophysiological and neuroimaging techniques to study brain-body interactions in physiology and psychiatry.

15:30-16:30 **Poster Session I with Coffee Break**

Invited Talk

16:30-17:00 **Alessandro Gozzi** | *Istituto Italiano di Tecnologia – Rovereto, Italy*
Perturbational decoding of fMRI connectivity.

Keynote Talk

17:00-18:00 **Simona Cocco** | *ENS, France*
Data driven models in zebrafish navigation: combining neural and behavioral data.

20:00 **Social Dinner with invited speakers**

TUESDAY, SEPTEMBER 23rd, 2025

Invited Talk

09:00-09:30 **Eugenio Piasini** | *SISSA, Italy*
How sharp is your razor? Quantifying the bias for simpler explanations in human decision-making.

Invited Talk
09:30-10:00 **Emanuele Menegatti** | *University of Padova, Italy*

Invited Talk
10:00-10:30 **Manfredo Atzori** | *University of Padova, Italy*
Knowledge Extraction from Multimodal Biomedical Data in Neuroscience.

10:30-11:30 **Poster Session II with Coffee Break**

Contributed Talk
11:30-11:45 **Riccardo Zecchina** | *Computing Science Dept., Bocconi, Italy*
Dynamical Deep Learning in Asymmetric Recurrent Networks.

Contributed Talk
11:45-12:00 **Federico Del Pup** | *University of Padova, Italy*
Addressing Generalizability Issues in Deep Learning-Based Electroencephalography Data Analysis.

Contributed Talk
12:00-12:15 **Simona Olmi** | *Istituto dei Sistemi Complessi (ISC-CNR), Italy*
Relaxation oscillations in next-generation neural masses with spike-frequency adaptation.

Contributed Talk
12:15-12:30 **Cristina Zucca** | *University of Torino, Italy*
Uncovering Input-Output Dynamics in Single Neuron Model through Mutual Information.

12:30-14:00 **Lunch**

Invited Talk
14:00-14:30 **Loredana Bellantuono** | *University of Bari, Italy*
Brain Connectivity Biomarkers: A Complex Network & XAI Approach to Neurological, Developmental, and Age-Related Conditions.

Invited Talk
14.30-15:00 **Claudia Casellato** | *University of Pavia, Italy*
Multiscale cerebellar circuit models.

Invited Talk

15:00-15.30 **Alessandro Torcini** | *CY Cergy Paris University, France*
A theory for self-sustained balanced states in absence of strong external currents.

15:30-16:30 **Poster Session II with Coffee Break**

Invited Talk

16:30-17:00 **Valentina Carabelli** | *University of Torino, Italy*
Diamond-based multiarrays and NV centers in nanodiamonds as probes for monitoring neuronal activity down to the nanoscale.

Keynote Talk

17:00-18:00 **Wolfgang Maass** | *Graz University of Technology, Austria*
Clues for the implementation of brain intelligence.

21:00-22:00 **Public Lecture**
Luca Mazzucato | *University of Oregon, USA*

WEDNESDAY, SEPTEMBER 24th, 2025

Contributed Talk

09:00-09:15 **Elisa Tentori** | *University of Padova, Italy*
Prediction and Modulation of Network Responses in Spiking Neuronal Cultures via Effective Connectivity and Latent State Dynamics.

Contributed Talk

09:15-09:30 **Margherita Premi** | *Politecnico di Milano, Italy*
A Computational Pipeline for Simulating Mouse Visual Cortex Microcircuits with Spiking Neural Networks.

Contributed Talk

09:30-09:45 **Gianni Valerio Vinci** | *Istituto Superiore di Sanità – Rome, Italy*

Noise induced phase transition in cortical neural field: the role of finite-size fluctuations.

Contributed Talk

09:45-10:00 **Cosimo Lupo** | *INFN – Rome, Italy*
Cobrawap: studying the wave dynamics as a tool for understanding brain networks.

Invited Talk

10:00-10:30 **Tommaso Gili** | *IMT School of Advanced Studies – Lucca, Italy*
Fibration symmetries support functional transitions in neural networks.

10:30-11:30 **Poster Session III with Coffee Break**

Invited Talk

11:30-12:00 **Sergio Martinoia** | *University of Genova, Italy*
Biological and digital brain twins: in-vitro and in-silico brain models

Invited Talk

12:00-12:30 **Silvestro Micera**

12:30-13:30 **Lunch**

Invited Talk

13:30-14:00 **Victor Buendia** | *Computing Science Dept., Bocconi, Italy*
Modularity in excitatory-inhibitory networks controls the dynamical regime and optimizes their computational capabilities.

Invited Talk

14:00-14:30 **Alessandro Treves** | *SISSA, Italy*
Disorder and Frustration in Spatial Cognition: The Demise of an Old Map.

Invited Talk

14:30-15:00 **Francesca Mastrogiuseppe** | *Champalimaud Foundation, Portugal*
Input-dependent Directionality of Interactions Between Cortical Areas.

Keynote Talk

15:00-16:00 **Andrea Brovelli** | *Aix-Marseille University, France*
Intrinsic motivational signals for information seeking and causal learning

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16:00-16:30 **Poster Session III with Coffee Break**

16:30-17:30 **Assemblea INCTN**

17:30 **Conclusions**
