PROGRAMME

MONDAY, SEPTEMBER 23

08:30   Registration

08:45   Welcome **Maurizio Mattia**

COMPUTATIONAL NEUROSCIENCE I

09:00   *The EBRAINS-Italy Research Infrastructure for Neuroscience Research* **Michele Migliore**

09:30   *A geometric neural principle for serial ordering* **Maurizio Mattia**

10:00   *Computational Neuroengineering for Parkinson's Disease* **Alberto Mazzoni**

10:30   Coffee break

MATHEMATICAL NEUROSCIENCE

11:00   *From single neuron to networks mathematical models* **Laura Sacerdote**

11:30   *Does Pavlov Classical Conditioning imply Hebb's learning rule?* **Adriano Barra**

12:00   *Networks of neural networks: the more is different* **Elena Agliari**

12:30   Lunch break - Poster session

KEYNOTE SPEAKER TALK

NEUROENGINEERING I

13:30   *The geometry of abstraction in human and non-human primates* **Stefano Fusi**

14:30   *In silico brain models for understanding pathologies* **Alessandra Pedrocchi**

15:00   *'Broadband' cortical neuronal ensembles* **Michele Giugliano**

15:30   Coffee break

NEUROENGINEERING II

16:00   *Towards personalized neuroengineering solutions to treat brain lesions* **Michela Chiappalone**

16:30   *When computational neuroscience becomes computational neuroengineering (and vice versa)* **Paolo Massobrio**

17:00   Poster session

17:30   End of work

TUESDAY, SEPTEMBER 24

STATISTICAL PHYSICS I

09:00   *Recurrent Neural Networks for Inference of Population Dynamics in Cortical Circuits* **Raffaella Burioni**

09:30   *Spontaneous vs. stimulated brain activity: A statistical physics approach* **Lucilla De Arcangelis**

10:00   *Daydreaming Hopfield Networks and their surprising effectiveness on correlated data* **Federico Ricci-Tersenghi**

10:30   Coffee break

COMPUTATIONAL NEUROSCIENCE II

11:00 *Dynamic information handling includes neural activity modulation in the frontal areas* **Stefano Ferraina**

11:30 *Multiscale brain modelling: from neurons to networks and virtual brains.* **Egidio D'Angelo**

12:00 *Glial place cells: complementary encoding of spatial information in hippocampal astrocytes* **Tommaso Fellin**

12:30 Lunch break - Poster session

KEYNOTE SPEAKER TALK

SYSTEMS NEUROSCIENCE I

13:30 *Characterizing how neural population codes transmit information downstream* **Stefano Panzeri**

14:30 *Next generation neural mass models: short term synaptic plasticity vs spike frequency adaptation* **Simona Olmi**

15:00 *Brain state specific apical mechanisms for incremental learning and sleep and the cobrawap pipeline* **Pier S. Paolucci**

15:30 Coffee break

SYSTEMS NEUROSCIENCE II

16:00 *Brain and criticality. A contribution from modelling and monkey in vivo data* **Antonio Pazienti**

16:30 *Diverse perceptual biases emerge from Hebbian plasticity in a recurrent neural network model* **Sebastian Goldt**

17:00 Round table: the Italian Network for Computational Neuroscience (INCN)

17:30 End of work

20:30 Social dinner

WEDNESDAY, SEPTEMBER 25

COGNITIVE NEUROSCIENCE

9:00 *Modeling visual perception in rodents using deep convolutional neural networks* **Davide Zoccolan**

9:30 *Neurocognitive modeling with energy-based deep generative models* **Marco Zorzi**

10:00 *Embodied decision-making and planning* **Giovanni Pezzulo**

10:30 Coffee break

STATISTICAL PHYSICS II

11:00 *Improving the Hopfield like approach* **Enzo Marinari**

11:30 *Simple models for neural activity at criticality* **Samir Suweis**

12:00 *TbA.* **Riccardo Zecchina**

12:30 Lunch break - Poster session

KEYNOTE SPEAKER TALK

13:30 *A dynamical systems view on multi-area neural computations* **Valerio Mante**

COMPUTATIONAL NEUROSCIENCE III

14:30   *Integration of rate and phase codes by hippocampal cell-assemblies supports flexible encoding of spatiotemporal context* **Eleonora Russo**

15:00   *Connectome-based models of feature selectivity in a cortical circuit* **Alessandro Sanzeni**

15:30   Coffee break

COMPUTATIONAL NEUROSCIENCE IV

16:00   *Memories reservoir and criticality in a spiking modular neural network* **Silvia Scarpetta**

16:30   *Behavioral state and stimulus strength regulate the role of somatostatin interneurons in stabilizing cortical network activity* **Nicolas Brunel**

17:00   Concluding remarks

17:30   End of work

Speakers and chairman:

Agliari Elena, Sapienza University of Rome -- **Barra Adriano**, Sapienza University of Rome -- **Brunel Nicolas**, Bocconi University, Milan-- **Burioni Raffaella**, University of Parma--**Chiappalone Michela**, University of Genoa -- **De Arcangelis Lucilla**, University of Campania "Luigi Vanvitelli", Naples -- **Fellin Tommaso**, Italian Institute of Technology, Genoa -- **Ferraina Stefano**, Sapienza University of Rome -- **Giugliano Michele**, University of Modena and Reggio Emilia, Modena -- **Goldt Sebastian**, International School of Advanced Studies, Trieste -- **Marinari Enzo**, Sapienza University of Rome -- **Mattia Maurizio**, National Center for Radiation Protection and Computational Physics (PRORA), ISS, Rome -- **Mazzoni Alberto**, The Biorobotics Institute, Sant'Anna School of Advanced Studies, Pisa -- **Migliore Michele**, Institute of Biophysics, National Research Council, Palermo -- **Olmi Simona**, Institute of Complex Systems, National Research Council, Florence -- **Pazienti Antonio**, National Center for Radiation Protection and Computational Physics (PRORA), ISS, Rome -- **Paolucci Pier Stanislao**, National Institute of Nuclear Physics, Rome -- **Pezzulo Giovanni**, National Research Council, Rome -- **Ricci Tersenghi Federico**, Sapienza University of Rome -- **Russo Eleonora**, Sant'Anna School of Advanced Studies, Pisa -- **Sacerdote Laura,** Lea,Department of Mathematics 'G.Peano', University of Turin -- **Sanzeni Alessandro**, Bocconi University, Milan -- **Scarpetta Silvia**, Department of Physics, University of Salerno -- **Suweis Samir**, University of Padova -- **Vinci Gianni Valerio**, (PRORA), ISS, Rome -- **Zecchina Riccardo**, Bocconi University, Milan -- **Zoccolan Davide**, International School For Advanced Studies, Trieste -- **Zorzi Marco**,University of Padova – **Cristiano Capone**, (PRORA), ISS, Rome

Keynote Speakers:

Stefano Fusi,   Columbia University, New York (USA)

Stefano Panzeri, University Hospital Hamburg Eppendorf, Hamburg (Germany)

Valerio Mante,   Federal Technology Zurich, Zurich (Switzerland)

Wi-Fi access network:

Guest Name: **INCN-24**

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Scientific Secretariat :

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