Timetable

Wednesday, July 8

08:45–09:15	**Registration**	
09:15–09:30	**Welcome address – Riccardo Meucci and Ludovico Minati**	
	Plenary Session *(Chair: Francesca Di Patti)*	
09:30–10:15	**G. Chen**	*From the Lorenz system to non-hyperbolic chaotic systems*
10:15–11:00	**C. Clementi**	*Modelling Protein Dynamics with Machine Learning and Molecular Simulation*
11:00–11:20	**Coffee break**	
	Session: **Complex Networks** *(Chair: Alessio Perinelli)*	
11:20–11:45	**M. Frasca**	*Controlling synchronization in multi-agent systems via higher-order interactions*
11:45–12:10	**C. Mocenni**	*Escaping Stagnant Traps: Joint Agency and Metastable Dynamics in Anti-Coordination Networks*
12:10–12:35	**D. Febbe**	*Random Walk on Simplicial Complexes*
12:35–13:00	**R. Potestio**	*We can't see the forest for the trees: investigating complex systems through the hazy lens of low-resolution representations*
13:00–14:15	**Lunch**	
	Session: **Machine Learning I** *(Chair: Lorenzo Buffoni)*	
14:15–14:40	**L. Chicchi**	*Spectral Decomposition of Feed-Forward Networks: Identifying Task-Essential Structure via Eigen-Projectors*
14:40–15:05	**L. Giambagli**	*Opening the black box: Interpreting Graph Neural Networks for Molecular Potentials*
15:05–15:30	**G. Peri**	*Spectral Higher-Order Neural Networks Have Finely Tunable Expressiveness*
15:30–15:55	**P. Calvo-Barlés**	*Physics-informed Neural Networks with dynamical boundary constraints*
15:55–16:30	**Coffee break**	
16:45–20:00	**Visit to "Arte Sella"**	

Timetable

Thursday, July 9

	Plenary Session *(Chair: Ludovico Minati)*	
09:30–10:15	**J. Kengne**	*On the Design of a High-Dimensional Hyperchaotic Hyperjerk System with Multiple Positive Lyapunov Exponents: A Case Study*
10:15–11:00	**B. Ulmann**	*Analog Computing as a Powerful Tool in the 21st Century*
11:00–11:30	**Coffee break**	
	Session: **Machine Learning II** *(Chair: Giacomo Innocenti)*	
11:30–11:55	**A. Lugnan**	*Optical dynamics in microresonator networks for machine learning and neuromorphic computing*
11:55–12:20	**D. Eckel**	*Hierarchical Lead Critic based Multi-Agent Reinforcement Learning*
12:20–12:45	**R. Paoli**	*Spectral Autoencoders*
12:45–14:00	**Lunch**	
	Session: **Chaos** *(Chair: Leonardo Ricci)*	
14:00–14:25	**R. Meucci**	*Ginoux-Meucci-Chua model with Piecewise-Linear Function*
14:25–14:50	**R. Concas**	*Structural Origin of Chaos in a Stabilized Semiconductor Laser*
14:50–15:15	**L. Fu**	*Higher-Order Interactions in Complex Oscillatory Networks: From Single-Transistor Chaotic Oscillators to Brain Dynamics*
15:15–15:40	**M. Cescato**	*Inhomogeneity of connectivity along a chain of chaotic oscillators*
15:40–16:00	**Coffee break**	
	Session: **Nonlinear Dynamics** *(Chair: Riccardo Meucci)*	
16:00–16:25	**M. Bucolo**	*Self-Induced Collective Dynamics in Cellular Populations under Hydrodynamic Forcing in Microchannels*
16:25–16:50	**S. Gretter**	*Phase-Controlled Complex Dynamics in a Silicon Microresonator*
16:50–17:25	**L. Meacci**	*Physics-Constrained Machine Learning for Complex Swelling Dynamics in Biological Porous Media*
17:25–17:50	**L. Minati**	*Thin film technology meets distributed sensing: architectural considerations for networks of analog sensors based on chaotic oscillators*
17:50–18:15	**C. Li**	*Chaos Regulation: From Geometric Regulation to Distribution Regulation*
	Special lecture on Antonio Meucci	
18:20–18:50	**R. Meucci**	*Antonio Meucci: From Telettrofono to the Smartphone*
19:00–22:00	**Social Dinner**	

Timetable

Friday, July 10

	Session: **Data Analysis** *(Chair: Matteo Cescato)*	
09:30–09:55	**A. Yassin**	*Extending Link-Prediction-Based Backbone Extraction to Temporal Networks*
09:55–10:20	**E. De Santis**	*From Symbolic Sequences to Fractal Growth. DLA-Based Complexity Signatures for Human, Machine, Code, and Synthetic Texts*
10:20–10:45	**R. Gokhman**	*Wavelet-Based Parameter Selection for Topological Data Analysis of Financial Bubbles*
10:45–11:10	**F. Onay**	*Power Law Characterization of Age Related Cortical Information Decay*
11:10–11:30	**Coffee break**	
	Session: **Electronic Systems** *(Chair: Giacomo Innocenti)*	
11:45–12:10	**M. Torelli**	*Adaptive Digital Predistortion with Batch-Identified Volterra-Laguerre Models and Mixture-of-Experts Supervision*
12:10–12:35	**F. Zhu**	*Effects of Pipelining Delay and Discretization on an FPGA Emulation of a Single-Transistor Chaotic Oscillator*
12:35–13:00	**J. Cuartero Galindo**	*Sound Synthesis on a Reconfigurable Analog Computer: Real-Time Physical Modeling*
13:00–14:10	**Lunch**	