

Wednesday July 8

08.45 - 09.15	Registration
09.15 - 09.30	Welcome (Riccardo Meucci and Ludovico Minati)
	Plenary Speakers (Chair: Francesca Di Patti)
09.30 - 10.15	Guanrong Chen - <i>From the Lorenz system to non-hyperbolic chaotic systems</i>
10.15 - 11.00	Cecilia Clementi - <i>Modelling Protein Dynamics with Machine Learning and Molecular Simulation</i>
11.00 - 11.20	Coffee break
	Complex Networks (Chair: Alessio Perinelli)
11.20 - 11.45	M. Frasca - <i>Controlling synchronization in multi-agent systems via higher-order interactions</i>
11.45 - 12.10	C. Mocenni - <i>Escaping Stagnant Traps: Joint Agency and Metastable Dynamics in Anti-Coordination Networks</i>
12.10 - 12.35	D. Febbe - <i>Random Walk on Simplicial Complexes</i>
12.35 - 13.00	R. Potestio - <i>We can't see the forest for the trees: investigating complex systems through the hazy lens of low-resolution representations</i>
13.00 - 14.15	Lunch
	Machine Learning (Chair: Lorenzo Buffoni)
14.15 - 14.40	L. Chicchi - <i>Spectral Decomposition of Feed-Forward Networks: Identifying Task-Essential Structure via Eigen-Projectors</i>
14.40 - 15.05	L. Giambagli - <i>Opening the black box: Interpreting Graph Neural Networks for Molecular Potentials</i>
15.05 - 15.30	G. Peri - <i>Spectral Higher-Order Neural Networks Have Finely Tunable Expressiveness</i>
15.30 - 15.55	P. Calvo-Barlés - <i>Physics-informed Neural Networks with dynamical boundary constraints</i>
15.55 - 16.30	Coffee break
16.45 - 20.00	Visit to Arte Sella

Thursday July 9

	Plenary Speakers (Chair: Ludovico Minati)
09.30 - 10.15	Jacques Kengne - <i>On the Design of a High-Dimensional Hyperchaotic Hyperjerk System with Multiple Positive Lyapunov Exponents: A Case Study</i>
10.15 - 11.00	Bernd Ulmann - <i>Analog Computing as a Powerful Tool in the 21st Century</i>
11.00 - 11.20	Coffee break
	Machine Learning II (Chair: Giacomo Innocenti)
11.20 - 11.45	A. Lugnan - <i>Optical dynamics in microresonator networks for machine learning and neuromorphic computing</i>
11.45 - 12.10	D. Eckel - <i>Hierarchical Lead Critic based Multi-Agent Reinforcement Learning</i>
12.10 - 12.35	R. Paoli - <i>Spectral Autoencoders</i>
12.35 - 13.00	A. Agarwal - <i>Graph based Prototypical Learning for Cross-Dataset Parkinson's Disease Detection Using Resting-State EEG</i>
13.00 - 14.00	Lunch
	Chaos (Chair: Leonardo Ricci)
14.00 - 14.25	R. Meucci - <i>Ginoux-Meucci-Chua model with Piecewise-Linear Function</i>
14.25 - 14.50	R. Concas - <i>Structural Origin of Chaos in a Stabilized Semiconductor Laser</i>
14.50 - 15.15	L. Fu - <i>Higher-Order Interactions in Complex Oscillatory Networks: From Single-Transistor Chaotic Oscillators to Brain Dynamics</i>
15.15 - 15.40	M. Cescato - <i>Inhomogeneity of connectivity along a chain of chaotic oscillators</i>
15.40 - 16.00	Coffee break
	Nonlinear Dynamics (Chair: Riccardo Meucci)
16.00 - 16.25	M. Bucolo - <i>Self-Induced Collective Dynamics in Cellular Populations under Hydrodynamic Forcing in Microchannels</i>
16.25 - 16.50	S. Gretter - <i>Phase-Controlled Complex Dynamics in a Silicon Microresonator</i>
16.50 - 17.25	L. Meacci - <i>Physics-Constrained Machine Learning for Complex Swelling Dynamics in Biological Porous Media</i>
17.25 - 17.55	A. Chaudhary - <i>Optimized PID Control for Yaw-Pitch Trajectory Tracking in a 2DOF Helicopter System Using different Algorithms</i>
17.55 - 18.20	M. Tchuisseuh - <i>On an improved Kazantsev inferior olive neuron model</i>
	Special lecture on Antonio Meucci
18.20 - 18.40	Riccardo Meucci - <i>Antonio Meucci : From Teletrofono to the Smartphone</i>
19.00 - 22.00	Social Dinner

Friday July 10

	Data Analysis (Chair: Matteo Cescato)
09.30 - 09.55	A. Yassin - <i>Extending Link-Prediction-Based Backbone Extraction to Temporal Networks</i>
09.55 - 10.20	E. De Santis - <i>From Symbolic Sequences to Fractal Growth. DLA-Based Complexity Signatures for Human, Machine, Code, and Synthetic Texts</i>
10.20 - 10.45	R. Gokhman - <i>Wavelet-Based Parameter Selection for Topological Data Analysis of Financial Bubbles</i>
10. 45 - 11.10	F. Onay - <i>Power Law Characterization of Age Related Cortical Information Decay</i>
11.10 - 11.30	Coffee break
	Electronic Systems (Chair: Giacomo Innocenti)
11.30 - 11.55	M. Torelli - <i>Adaptive Digital Predistortion with Batch-Identified Volterra-Laguerre Models and Mixture-of-Experts Supervision</i>
11. 55 - 12.20	D. Jangra - <i>Individual Channel based control framework for Single-Inductor Double-Output DC-DC Boost Converter Systems</i>
12. 20 - 12.45	L. Minati - <i>Thin film technology meets distributed sensing: architectural considerations for networks of analog sensors based on chaotic oscillators</i>
12.45 - 13.10	F. Zhu - <i>Effects of Pipelining Delay and Discretization on an FPGA Emulation of a Single-Transistor Chaotic Oscillator</i>
13.10 - 13.35	J. Cuartero Galindo - <i>Sound Synthesis on a Reconfigurable Analog Computer: Real-Time Physical Modeling</i>
13.35 - 14.35	Lunch