

# IV Conference of the Italian Society of Statistical Physics - SIFS

MONDAY, JUNE 24<sup>th</sup> 2024

9:00 - 9:30	<b>Opening</b>
9:30 - 9:50	Federico Battiston - <i>Central European University</i> <b>Explosive cooperation in social dilemmas on higher-order networks</b>
9:50 - 10:10	Aurelio Patelli - <i>CREF</i> <b>Optimal Transport on Economic Complexity Networkxs</b>
10:10 - 10:30	Federica De Domenico - <i>University of Pavia - INFN</i> <b>Imitation vs serendipity in the society</b>
10:30 - 10:50	Davide Venturelli - <i>LTPMC - Sorbonne Université</i> <b>Multifractality in disordered graphs: insights from two random matrix models</b>
10:50 - 11:20	<b>Coffee Break</b>
11:20 - 12:00	Eli Barkai - <i>Bar Ilan University</i> <b>Hitting times for quantum walks and for spin systems</b>
12:00 - 12:20	Giuseppe Fava - <i>Università dell'Insubria</i> <b>Strong Casimir-like Forces in Flocking Active Matter</b>
12:20 - 12:40	Livio Nicola Carenza - <i>Koç University - Physics Department</i> <b>Do active liquid crystals exist after all?</b>
12:40 - 13:00	Emanuele Locatelli - <i>University of Padova</i> <b>Conformation and dynamics of active polymers in bulk and under confinement</b>
13:00 - 14:30	<b>Lunch</b>
14:30 - 14:50	Luca Smaldone - <i>Università degli studi di Salerno</i> <b>Ordering kinetics of the voter model with long-range interactions</b>
14:50 - 15:10	Indaco Biazzo - <i>EPFL</i> <b>Boltzmann Autoregressive Neural Networks</b>
15:10 - 15:50	Claudio Maggi - <i>CNR-Nanotec - Roma</i> <b>Continuous phase transitions in active particles systems</b>
15:50 - 16:20	<b>Coffee Break</b>
16:20 - 16:40	Paolo Baglioni - <i>Università di Parma</i> <b>Probing Kernel Renormalization in finite-width Bayesian Shallow Neural Networks</b>
16:40 - 17:00	Marco Gherardi - <i>Università degli Studi di Milano</i> <b>Universal training dynamics in deep learning</b>
17:00 - 18:30	<b>Assemblea dei Soci della Società Italiana di Fisica Statistica - SIFS</b> Durante questa sessione avrà luogo l'Assemblea dei Soci della SIFS, riservata ai soci della Società.

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TUESDAY, JUNE 25<sup>th</sup> 2024

9:30 - 9:50	<b>Greetings</b>
9:50 - 10:30	Sergio Ciliberto - <i>ENS-Lyon</i> <b>Inertial effects in discrete sampling information engines</b>
10:30 - 11:40	<b>Coffee Break &amp; Poster Session</b>
11:40 - 12:20	Cesare Nardini - <i>CEA University Paris-Saclay</i> <b>Active Phase Separation</b>
12:20 - 13:00	Angelo Vulpiani - <i>Università Sapienza, Roma</i> <b>Inferring Non-Equilibrium from Incomplete Information</b>
13:00 - 14:30	<b>Lunch</b>
14:30 - 15:10	Julien Barré - <i>Université d'Orléans, France</i> <b>On some bifurcations of Vlasov equation</b>
15:10 - 15:50	Lucilla de Arcangelis - <i>Vanvitelli University</i> <b>Fluctuation-Dissipation Relations for Brain Activity</b>
15:50 - 16:50	<b>Coffee Break &amp; Poster Session</b>
16:50 - 17:30	Andrea Trombettoni - <i>Università di Trieste</i> <b>Criticality and Phase Diagram of Quantum Long-Range Systems</b>
17:30 - 18:10	Antonio Politi - <i>CNR - ISC, Sezione di Sesto Fiorentino</i> <b>Quasi-Hamiltonian dynamics of laser systems</b>
19:15 - 20:15	<b>Aperitif at Cortile dell'Università</b>
20:30	<b>Social dinner at Sala delle Colonne - Palazzo dell'Università</b>

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WEDNESDAY, JUNE 26<sup>th</sup> 2024

- 9:30 - 9:50 Danilo Forastiere - *Università di Padova*  
**Probing the hidden structure of polymer fluids via active microrheology**
- 9:50 - 10:10 Maria Grazia Izzo - *Università Ca' Foscari*  
**The interplay between liquid-liquid and ferroelectric phase transitions in supercooled water**
- 10:10 - 10:30 Niccolo Cirone - *University of Turin*  
**The intrinsic dimension of cell differentiation**
- 10:30 - 10:50 Matteo Polettini - *Self-employed*  
**Minimal (post)modern thermodynamics**
- 10:50 - 11:20 **Coffee Break**
- 11:20 - 12:00 Laura Foini - *CNRS IPhT Université Paris-Saclay*  
**The eigenstate thermalization hypothesis and free probability**
- 12:00 - 12:20 Alessandro Santini - *SISSA*  
**Quantum Trajectories and Probability Distributions: Uncovering the Dynamics of Monitored Quantum Many-body Systems**
- 12:20 - 12:40 Filiberto Ares - *SISSA*  
**Entanglement asymmetry and the quantum Mpemba effect**
- 12:40 - 13:00 Lorenzo Buffoni - *Università degli Studi di Firenze*  
**Qubits together strong: preparation of large high-fidelity qubit registers via cooperative effects**
- 13:00 - 14:30 **Lunch**
- 14:30 - 14:50 Colin Rylands - *SISSA*  
**Nonequilibrium full counting statistics in integrable models**
- 14:50 - 15:10 Massimiliano Semeraro - *Università degli Studi di Bari - INFN*  
**Work Fluctuations for a Harmonically Confined Active Ornstein-Uhlenbeck Particle**
- 15:10 - 15:30 Andrea Fontana - *Università di Napoli "Federico II" - INFN*  
**Polymer physics models predict chromatin organization of SARS-CoV-2 infected cells**
- 15:30 - 16:00 **Coffee Break**
- 16:00 - 16:20 Flavio Nicoletti - *Sapienza Università di Roma*  
**Low energy excitations in mean field spin glasses**
- 16:20 - 17:00 Massimo Materassi - *CNR-ISC*  
**Huge room for Statistical Physics in the Ionospheric Physics and Space Weather**