XXIII National Conference on Statistical Physics and Complex Systems

in collaboration with **Scuola IMT Alti Studi Lucca** and with **the French Embassy in Italy**

June $20^{th} - 22^{nd}$ 2018

Conference Center - Aule delle Scienze, Università di Parma - Campus

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SCHEDULE FOR WEDNESDAY, JUNE 20th 2018

9:30 - 10:00	**check in**
10:00 - 10:30	**Matteo Paris** - *Università degli Studi di Milano* **An all-optical quantum simulator for the dynamics of open quantum systems**
10:30 - 11:00	**Paolo Giorda** - *Università di Pavia* **Coherence and quantum estimation**
11:00 - 11:30	**coffee break**
11:30 - 12:00	**Alessandro Codello** - *SISSA, Trieste* **Universality in the epsilon-expansion**
12:00 - 12:30	**Matteo Polettini** - *University of Luxembourg* **Effective thermodynamics for a marginal observer**
12:30 - 13:00	**Matteo Osella** - *Università di Torino* **Statistics of shared components in complex component systems**
13:00 - 14:30	**lunch break**
14:30 - 15:00	**Marco Budinich** - *Università di Trieste & INFN* **The SATisfiability problem in spinorial form**
15:00 - 15:30	**Giacomo Gradenigo** - *CNR-NANOTEC, Roma* **Glassy behaviour of light: insights from numerical simulations on realistic complex networks**
15:30 - 16:00	**Andrea Gabrielli** - *CNR-ISC, Roma* **Statistical physics approach to unfold the innovation system for the development of countries: co-evolution of Science, Technology and Production**
16:00 - 16:30	**coffee break**
16:30 - 17:00	**Marco Zamparo** - *Politecnico di Torino* **On the Mean Residence Time in Stochastic Lattice-Gas Models**
17:00 - 17:30	**Alessandra Bianchi** - *Università di Padova* **Random walk in a non-integrable random scenery time**

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Schedule for Thursday, June 21st 2018 - cassini session

9:30 - 10:10	**Miguel Angel Muñoz** - *Universidad de Granada* **Landau-Ginzburg theory of cortex dynamics**
10:10 - 10:35	**Trang-Anh Nghiem** - *European Institute of Theoretical Neuroscience, Paris* **Spectral structure of human brain activity: an analogy with thermodynamics**
10:35 - 11:00	**Elif Köksal Ersöz** - *INRIA Sophia Antipolis - Méditerranée* **Anticipation via canards in excitable systems**
11:00 - 11:45	**coffee break and poster session**
11:45 - 12:15	**Matteo di Volo** - *UNIC CNRS France* **Collective dynamics in cortical networks: from asynchronous irregular to oscillations**
12:15 - 12:40	**Hongjie Bi** - *Université de Cergy-Pontoise, France* **Coexistence of oscillatory states in balanced spiking inhibitory networks**
12:40 - 13:05	**Wesley Clawson** - *INS, Aix-Marseille University* **Switching States of Neuronal Networks in the Brain**
13:05 - 14:30	**lunch break**
14:30 - 15:00	**Rossana Mastrandrea** - *Scuola IMT Alti Studi Lucca* **The basal scaffold of the brain functional architecture**
15:00 - 15:30	**Tiziano Squartini** - *Scuola IMT Alti Studi Lucca* **Entropy-based approach to missing-links prediction**
15:30 - 16:00	**Pierfrancesco Di Cintio** - *CNR-IFAC & INFN, Firenze* **N-body chaos and the continuum limit in numerical simulations, revisited**
16:00 - 16:45	**coffee break and poster session**
16:45 - 17:15	**Alberto Petri** - *CNR-ISC, Roma* **Hydro vs micro-dynamics of a column shaken beads**
17:15 - 18:30	**discussion**
20:00	**social dinner at "Trattoria Antichi Sapori" - Gaione (Parma)**

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SCHEDULE FOR FRIDAY, JUNE 22nd 2018 - YOUNG REASEARCHERS DAY

9:30 - 9:50	**Andrea Mazzolini** - *ICTP, Trieste* **Zipf and Heaps laws from dependency structures in component systems**
9:50 - 10:10	**Marco Baldovin** - *Sapienza Università di Roma* **Langevin equation in systems with also negative temperatures**
10:10 - 10:30	**Mattia Radice** - *Università dell'Insubria* **A persistent random walk on an averaged environment for the Lévy-Lorentz gas**
10:30 - 10:50	**Alessandro Colombo** - *Università degli Studi di Milano* **Miming the Memes for Imaging the Unimagined**
10:50 - 11:20	**coffee break**
11:20 - 11:40	**Marco Faccioli** - *Università di Padova* **Gaussian fluctuations in quantum phase transitions**
11:40 - 12:00	**Francesco Mambretti** - *Università degli Studi di Milano* **Energy-landscape driven crystallization slowdown in supercooled liquid mixtures**
12:00 - 12:20	**Chahan Kropf** - *INFN, Pavia* **Optimal exciton current in one-dimensional chains**
12:20 - 12:40	**Rosa Giuliano** - *Università della Calabria* **Persistent current and zero-energy Majorana modes in a p-wave disordered superconducting ring**
12:40 - 13:00	**Andrea Colcelli** - *SISSA, Trieste* **Deviations from Off-Diagonal Long-Range Order and Mesoscopic Condensation in One-Dimensional Quantum Systems**
13:00 - 14:30	**lunch break**
14:30 - 14:50	**Zeno Filiberti** - *Università dell'Insubria* **A statistical approach to thermo-osmosis**
14:50 - 15:10	**Lorenzo Caprini** - *Gran Sasso Science Institute (GSSI)* **Activity induced delocalization and freezing in self-propelled systems**
15:10 - 15:30	**Francesco De Santis** - *Sapienza Università di Roma* **Computation of the Zero Temperature RSB order parameter in Bethe Lattice Spin Glasses**
15:30 - 15:50	**Giacomo Rapisardi** - *Scuola IMT Alti Studi Lucca* **Multiple structural transitions in interacting networks**
15:50 - 16:10	**Jonathan Fiorentino** - *Sapienza Università di Roma* **Statistics of optimal information flow in ensembles of regulatory motifs**

POSTER SESSION - THURSDAY

Giulio Amato - *Freiburg University*
Quantum transport with cold atoms

Marco Baiesi - *Università di Padova*
Response to noise variations in stochastic systems

Victor Buendia Ruiz-Azuaga - *Università di Parma e Universidad de Granada*
Limited role of spatial self-structuring in emergent trade-offs during pathogen evolution

Davide Emilio Galli - *Università degli Studi di Milano*
Quantum Critical Behavior of One-Dimensional Soft Bosons in the Continuum

Manuele Onofri - *Università dell'Insubria*
Simulations on a persistent random walk on an averaged environment for the Lévy-Lorentz gas

Francesco Petiziol - *Università di Parma*
Structure of counterdiabatic fields and approximate counterdiabatic driving

Marco Pretti - *ISC-CNR, Torino*
Dynamical transition in the TASEP with Langmuir kinetics: mean-field theory

Anjan Roy - *Università dell'Insubria*
Bacterial populations with growth heterogeneity

Michele Tizzani - *Università di Parma*
Epidemics Spreading on temporal networks with memory effects

Pablo Villegas - *Universidad de Granada*
Landau Ginzburg theory of cortex dynamics: Scale-free avalanches emerge at the edge of synchronization

Alexander Wagner - *Ruprecht-Karls-Universität, Heidelberg*
Topological effects in quantum walks of a BEC