

VENICE MEETING ON FLUCTUATIONS IN SMALL COMPLEX SYSTEMS VII

Istituto Veneto di Scienze, Lettere ed Arti

23rd to 27th September 2024

MONDAY, 23RD SEPTEMBER	
9:00	Opening
9:15	ALJAZ GODEC <i>Thermodynamic cost of observable transport</i>
9:45	OLIVER BÉNICHOU <i>t.b.a</i>
10:15	HEIKO RIEGER <i>t.b.a.</i>
10:45	Coffee Break
11:15	ANDREA GAMBASSI <i>Fluctuating particles in correlated fields</i>
11:45	CRISTIAN MICHELETTI <i>Designed self-assembly of molecular knots, links, and topological gels</i>
12:15	VITTORI SPOSINI <i>Extreme Brownian non-Gaussian searches</i>
12:30	MARCO BALDOVIN <i>Optimal Control of Underdamped Systems: An Analytic Approach</i>
12:45	Lunch
14:30	FELIX RITORT <i>Variance sum rule for negentropy</i>
15:00	JAE-HYUNG JEON <i>t.b.a</i>
15:30	Yael ROICHMAN <i>Thermodynamic Uncertainty Relation in Driven Colloidal Suspensions</i>
16:00	Coffee Break
16:30	KRZYSZTOF BURNECKI <i>Tempered fractional processes as transient anomalous diffusion models</i>
17:00	MATTEO OSELLA <i>The intrinsic dimension of cell differentiation</i>
17:15	SAMUDRAJIT THAPA <i>Multifractional Brownian motion with telegraphic, stochastically varying exponent</i>
17:30	Poster Session

TUESDAY, 24TH SEPTEMBER	
9:00	CLEMENS BECHINGER <i>Brownian Particles in Non-Equilibrium Baths</i>
9:30	ELI BARKAI <i>First hitting times on noisy quantum computers</i>



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10:00	MICHAEL ASSAF <i>Phase transition and ergodicity breaking in movement of avians</i>
10:30	FONDAZIONE ALMA DAL CO
10:45	Coffee Break
11:15	TAKUMA AKIMOTO <i>Noise-induced transitions in random Pomeau-Manneville maps</i>
11:45	MARCO BAIESI <i>Nonequilibrium fluctuations in active microrheology link friction to the fluid's structure</i>
12:15	GIADA FORTE <i>Modelling the 3D spatiotemporal organisation of chromatin replication</i>
12:30	ALESSIO SQUARCINI <i>Dimensional crossover via confinement in the lattice Lorentz gas</i>
12:45	Lunch
14:30	GIUSEPPE GONNELLA <i>Dynamical Phase Transitions for Confined Active Particles</i>
15:00	CHRISTINE SELHUBER UNKEL <i>In situ control of living cellular systems by 3D materials</i>
15:30	CARLOS MEJIA MONASTERIO <i>Anomalous anomalous transport in polygons</i>
16:00	Coffee Break
16:30	STEFANO DI TALIA <i>Cell cycle control and morphogenesis in early Drosophila embryos</i>
17:00	EIJI YAMAMOTO <i>Diffusion of intrinsically disordered proteins within multicomponent protein condensates</i>
17:30	Poster Session

WEDNESDAY, 25TH SEPTEMBER	
9:00	RAFFAELLA BURIONI <i>Fast Rare events in exit time distributions of jump processes</i>
9:30	ANDREA PUGLISI <i>What Thermodynamic Uncertainty Relations Reveal (and Don't) About the Physical World</i>
10:00	DMITRI CHKLOVSKII <i>What does the neuron do? A new model for neuroscience and AI</i>
10:30	DAVIDE VENTURELLI <i>Interacting particles in $d>1$ and on comb-like structures</i>
10:45	Coffee Break
11:15	PETER SOLLICH <i>Distinguishing active particle models from their rare fluctuations</i>
11:45	ANA SUNCANA SMITH <i>t.b.a</i>



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12:15	HENRIK SECKLER <i>t.b.a</i>
12:30	GIANLUCA TEZA <i>Nonequilibrium shortcuts and anomalous thermal relaxations</i>
12:45	Lunch
14:30	YASMINE MEROZ <i>t.b.a.</i>
15:00	NATHALIE BALABAN <i>A statistical physics approach to cells under acute stress</i>
15:30	Excursion & Social Dinner

THURSDAY, 26TH SEPTEMBER	
9:00	DIEGO KRAPF <i>Tracking human and mouse sperm cells</i>
9:30	THOMAS FRANOSCH <i>Run-and-Tumble motion of an active particle</i>
10:00	DMITRII E MAKAROV <i>Biophysics of molecular machines from single-molecule observations</i>
10:30	DARIO LUCENTE <i>Entropy production in a minimal brain model: Conceptual and practical remarks</i>
10:45	Coffee Break
11:15	UDO SEIFERT <i>Thermodynamic inference beyond the thermodynamic uncertainty relation</i>
11:45	DORIS HEINRICH <i>Principal processes of cellular orientation: Topotaxis and Chemotaxis</i>
12:15	MATTHIAS WEISS <i>Dynamic allometry of nucleus and cell size in simple model organisms</i>
12:45	Lunch
14:30	ENRICO CARLON <i>Chromosomal structure from high resolution microscopy: scaling laws and microphase separation</i>
15:00	GIANMARIA FALASCO <i>Error and dissipation in electronics memories and clocks</i>
15:30	SEAN LAWLEY <i>Asymptotics of diffusive, subdiffusive, and superdiffusive search</i>
16:00	Coffee Break
16:30	ALEKSEI CHECHKIN <i>Continuous time random walks versus mobile-immobile models</i>
17:00	PASCAL VIOT <i>Brownian Gyration: Fluctuat nec mergitur</i>



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17:30	Public Lecture & Concert
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TUESDAY, 24TH SEPTEMBER	
9:00	ALEENA LAXMI PATEL <i>Heterogeneity of chromosome-scale genome loops in the Drosophila melanogaster brain</i>
9:30	LEONID MIRNY <i>Chromosomes as memory machines</i>
10:00	ELIZABETH GAVIS <i>Developmental plasticity of germline ribonucleoprotein granules</i>
10:30	ERIK KALZ <i>Subtle interactions in odd-diffusive systems</i>
10:45	Coffee Break
11:15	ELENA KOSLOVER <i>Tunneling through the Cell: Structure and Transport in Organelle Networks</i>
11:45	STANISLAV SHVARTSMAN <i>t.b.a</i>
12:15	DAVID STEIN <i>t.b.a</i>
12:45	Lunch
14:30	ÉDGAR ROLDÁN <i>Gambling Carnot engine</i>
15:00	FULVIO BALDOVIN <i>Dynamical large deviation theory, self-similarity, and criticality</i>
15:30	DAVIDE MARENDUZZO <i>Topology and transcription in 3D chromatin loop networks</i>
16:00	Coffee Break
16:30	JAKUB SPIECHOWICZ <i>Effective mass approach to memory in non-Markovian systems</i>
17:00	ALBERTO IMPARATO <i>First-passage information engine</i>
17:30	Concluding remarks

18:30	FAREWELL DINNER
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