

Wednesday, July 12, 2023

MINOS MAIN HALL

	Plenary	MAIN CONFERENCE	Wednesday 12
09.00 - 09.40	Löwen H.	<i>Inertial effects in active matter</i>	Chair
09.40 - 10.20	Geisel T.	<i>Musicians' Synchronization and the Mystery of Swing in Jazz</i>	Aharony A.
10.20 - 11.00	Marinari E.	<i>Memory and dreaming in the Hopfield model</i>	
11.00 - 11.30	Coffee break		

MINOS MAIN HALL

	Area A	MAIN CONFERENCE	Wednesday 12
11.30 - 12.00	Metzler R.	Long-range correlated processes: confinement, heterogeneity, & tempering	Chair
12.00 - 12.30	Jizba P.	<i>A new class of entropy-power-based uncertainty relations</i>	Ilić V.
12.30 - 12.50	Malarz K.	<i>Searching for universal formula for percolation threshold on two-dimensional</i>	
12.50 - 13.10	Morikawa M.	<i>A simple model of 1/f fluctuations from amplitude modulation and demodulation</i>	
13.10 - 13.30	Fang X.	<i>High-dimensional central limit theorem by Stein's method</i>	
13:30 - 15.00	Break		
15.00 - 15.30	Sollich P.	Bringing together two paradigms of non-equilibrium: Driven dynamics of aging	Chair
15.30 - 15.50	López J.M.	Lyapunov vectors and the energy levels of the directed polymer in random media	Malarz K.
15.50 - 16.10	Tsori Y.	<i>Generic mean-field model for phase transitions in nonuniform forces</i>	
16.10 - 16.30	Field T.	<i>Dynamics of an entangled state under random magnetic fields</i>	
16.30 - 16.50	Shchur L.	<i>Effect of anisotropy on critical temperature estimation using machine learning</i>	
16.50 - 17.10	Schreiber N.	<i>Ensemble dependence of the critical behavior of a system with long range</i>	
17.10 - 17.30	Coffee break		
	Workshop 3	Complex Networks: Hidden Geometry and Dynamics	Wednesday 12
17.30 - 18.00	Odor G.	<i>Higher-order interactions generate mixed order phase transition and Griffiths....</i>	Chair
18.00 - 18.30	Dankulov M.M.	<i>Complex networks analysis of time-series data: finding patterns in socio-....</i>	Gupte N.
18.30 - 18.50	Liang X.S.	<i>Measuring the importance of individual units to the structure integrity of a</i>	
18.50 - 19.10	Hlinka J.	<i>Hidden geometry of brain dynamics revealed by persistent homology</i>	
19.10 - 19.30	Watorek M.	<i>Decomposition of cross-correlation networks by means of the concept of q-MST</i>	
19.30 - 20.00	Tadic B.	<i>Emergence of modulated cycles in critical dynamics</i>	

ARIADNE HALL

Workshop 9		Fifty years of the renormalization group	Wednesday 12
11.30 - 12.00	Kosterlitz J.M.	Exact results from approximate theories at critical points from a renormalization ...	Chair
12.00 - 12.30	A. Aharony	Open questions on the random field Ising model	Beck C.
12.30 - 13.00	Delfino G.	Universality in nonequilibrium quantum dynamics	
13.00 - 13.30	Dudka M.	Phase transitions in three-dimensional random anisotropy Heisenberg magnets	
13:30 - 15.00	Break		
Workshop 7		Fluctuations in Physics	Wednesday 12
15.00 - 15.20	Barkai E.	<i>Packets of spreading particles exhibit universal exponential tails</i>	Chair
15.20 - 15.40	Dantchev D.	<i>On ensemble dependence of fluctuation-induced forces: Exact results for</i>	Rubi M.
15.40 - 16.00	Fariás C.	<i>Temperature distribution in finite systems: Application to the one-dimensional</i>	
16.00 - 16.20	Franosch T.	<i>Nonlinear response in dilute colloidal suspensions beyond the fluctuation-....</i>	
16.20 - 16.40	Ghim C.	<i>Anomalous relaxation of a brownian particle in active baths</i>	
16.40 - 17.00	Ghosh A.	<i>Coupled dynamical phase transitions in driven disk packings</i>	
17.00 - 17.30	Coffee break		
17.30 - 17.50	Morikawa M.	<i>Verifications of the origin of 1/f noise -Earthquakes, solar flare, and variable</i>	Chair
17.50 - 18.10	Rubi M.	<i>Stochastic resonance for an optimal transport of active particles</i>	Barkai E.
18.10 - 18.30	Oliveira F.	<i>Dynamics, fractal geometry and fluctuation-dissipation relations in the Kardar....</i>	
18.30 - 18.50	Mozyrsky D.	<i>Phase transition in fluctuations of interacting spins at infinite temperature</i>	
18.50 - 19.10	Mukherjee A.	<i>Dynamic correlations in the conserved Manna sandpile</i>	
19.10 - 19.30	Park H.	<i>Classical speed limit and finite-time Landauer's bound</i>	
19.30 - 19.50	Rodriguez-Fernandez E.	<i>Nonequilibrium critical dynamics: upturns from surface kinetic roughening</i>	
19.50 - 20.10	Reis F.	<i>Universal superdiffusion of random walks on lattices with low diffusivity fractal...</i>	

PASIPHAE HALL

Area C		MAIN CONFERENCE	Wednesday 12
11.30 - 11.50	Burina E.	Modeling hybrid economic systems - money and tokens as incentives for ...	Chair
11.50 - 12.10	Colombini G.	<i>Equivalence of solitonic solutions in a neuron chain and single neuron delay</i>	Talbot J.
12.10 - 12.30	Saad D.	<i>Pandemics, marketing and opinion formation – the power of spreading processes</i>	
12.30 - 12.50	Kollas K.	<i>An improved indicator for causal interactions in non-linear systems</i>	
12.50 - 13.10	Lombardi F.	<i>Explaining the coexistence of oscillations and scale-free avalanches in resting</i>	
13.10 - 13.30	Mitsokapas E.	<i>Decision-making with distorted memory: Escaping the trap of past experience</i>	
13:30 - 15.00	Break		
Special Session 2		Entropies and Correlations in Complex Systems	Wednesday 12
15.00 - 15.10		<i>Welcome words by the Special Session organizers</i>	Chair
15.10 - 15.40	Wada T.	<i>Nonlinear constitutive relations by using some deformed functions</i>	Jizba P.
15.40 - 16.10	Ván P.	<i>Extensivity of thermodynamic bodies, weak nonlocality of continua and ...</i>	
16.10 - 16.40	Quevedo H.	<i>Quasi-homogeneous black hole thermodynamics</i>	
16.40 - 17.10	Ilić V.	<i>Super-additivity, generalized concavity and quasi-homogeneity in non-additive systems</i>	
17.10 - 17.30	Coffee break		
17.30 - 18.00	Tirnakli U.	<i>Characterization of degree and energy distributions in asymptotically ...</i>	Chair
18.00 - 18.30	Tsallis C.	<i>Statistical mechanics for complex systems – news and views</i>	Loos S.
18.30 - 19.00	Beck C.	<i>Heavy-tailed distributions from superstatistics: Recent applications for power ...</i>	
19.00 - 19.20	Somazzi A.	<i>Learn your entropy from informative data: an axiom ensuring the consistent ...</i>	
19.20 - 19.40	Srdinsek M.	<i>Rényi entropy of quantum anharmonic chain at non-zero temperature</i>	
19.40 - 20.00	Barbosa F.	<i>Residual entropy in the repulsive one-dimensional lattice model of liquid water</i>	

THESEUS HALL

Workshop 4		Climate and Environments	Wednesday 12
11.30 - 11.50	Livina V.	<i>Statistical physics approach in tipping point analysis</i>	Chair Blesic S.
11.50 - 12.10	Ludescher J.	<i>Forecasting El Niño well before the spring predictability barrier</i>	
12.10 - 12.30	Yuan N.	<i>On the global warming projection: a new approach based on scaling theory</i>	
12.30 - 12.50	Wang B.	<i>Assessing the impact of climate change on fungal pathogens and insect pests</i>	
12.50 - 13.10	Blesic S.	<i>Characterization of meteorological drivers for incidences of malaria in South Africa</i>	
13.10 - 13.30	Bianucci M.	<i>Linear or Nonlinear Modeling for ENSO Dynamics?</i>	
Break			
15.00 - 15.20	Venturi D.	<i>Approximation of functional differential equations</i>	Chair Hristopulos D.
15.20 - 15.40	Liang X.S.	<i>Causality as a real physical notion ab initio, and causality analysis in climate and...</i>	
15.40 - 16.00	Žukovič M.	<i>Spin models for efficient prediction of massive spatial data</i>	
16.00 - 16.20	Nerantzaki S.	<i>Interpolation of large precipitation fields with space and space-time stochastic...</i>	
16.20 - 16.40	Hristopulos D.	<i>Boltzmann-Gibbs distributions and applications to data-driven modeling</i>	
16.40 - 17.00	Reis F.	<i>Modeling the deep abiotic weathering of pyrite</i>	
Coffee break			
17.30 - 17.50	Zharkova V.	<i>Periodicities in solar activity, solar radiation and their links with terrestrial</i>	Chair Zukovic M.
17.50 - 18.10	Gentili S.	<i>A machine learning approach for strong aftershock forecasting by the NESTORE...</i>	
18.10 - 18.30	Marder M.	<i>Solvable model for the decline of unconventional oil and gas</i>	

AMALTHEA HALL

Workshop 5		Statistical Physics of Biophysical Systems	Wednesday 12
11.30 - 12.00	Fedotov S.	<i>Ensemble self-reinforcement and strong memory effects for the anomalous ...</i>	Chair Hatzikirou H.
12.00 - 12.23	Deo N.	<i>Mutations in Protein Family Networks</i>	
12.23 - 12.45	Fiasconaro A.	<i>Analytical extension/force curve of the freely jointed chain (FJC) and the ...</i>	
12.45 - 13.07	Sung B.	<i>The non-equilibrium nature of the packaging and the ejection processes of viral DNA</i>	
Break			
15.30 - 15.53	Baek Y.	<i>Symmetry-breaking motility and diffusion of a porous object immersed in an...</i>	Chair Deutsch A.
15.53 - 16.16	Frydel D.	<i>The entropy production rate for active matter</i>	
16.16 - 16.39	Hatzikirou H.	<i>On a theory of cell decision-making for multicellular systems</i>	
16.39 - 17.02	Sung J.	<i>Nonclassical Chemical Dynamics in Living Cells and Complex Material Systems</i>	
Coffee break			
17.30 - 18.00	Deutsch A.	<i>Cancer invasion and progression: insights from agent-based models</i>	Chair Fedotov S.
18.00 - 18.23	Po H.F.	<i>Inferring structure from firing patterns of cortical neural networks</i>	
18.23 - 18.45	Spiliotis K.	<i>Combining topological data analysis with equation-free methods to analyse ...</i>	
18.45 - 19.08	Corominas-murtra B.	<i>Phase transitions in embryo morphogenesis</i>	

MINOTAUR HALL

Area B		MAIN CONFERENCE		Wednesday 12
11.30 - 12.00	Hyeon C.	<i>Irregularity of polymer domain boundaries in two dimensional polymer solution</i>	Chair Spicka V.	
12.00 - 12.20	Constantoudis V.	<i>The challenge of nanostochasticity: Complexity concepts and methods in the....</i>		
12.20 - 12.40	Papia E.-M.	<i>Entropy and complexity analysis of AI-generated and human-made paintings</i>		
12.40 - 13.00	Kim K.-W.	<i>Monte Carlo method for active particle dynamics with thermodynamic consistency</i>		
13.00 - 13.20	Lauditi C.	<i>Learning through atypical "phase transitions" in overparameterized neural</i>		
13:20 - 15.00	Break			
Workshop 10		Non-Extensive Statistical Mechanics and Kappa Distributions		Wednesday 12
15.00 - 15.25	Kourakis I.	<i>Nonlinear electrostatic waves in non-Maxwellian space plasmas: overview of....</i>	Chair Viviane P.	
15.25 - 15.45	Lazarides N.	<i>Coupled electrostatic wavepackets in plasmas: on the role of kappa-distributed....</i>		
15.45 - 16.10	Munoz V.	<i>Parametric decays of electromagnetic waves in electron-positron nonextensive...</i>		
16.10 - 16.30	Qureshi N.	<i>Electromagnetic ion cyclotron waves and associated ion velocity distributions:</i>		
16.30 - 16.50	Da Silveira F.	<i>Langmuir waves in kappa plasmas</i>		
16.50 - 17.10	Yoon P.	<i>Generation of regularized kappa electron velocity distribution function by</i>		
17.10 - 17.30	Coffee break			
17.30 - 18.00	Consolini G	<i>Markov features and kappa distribution of magnetic field fluctuations at ion/sub....</i>	Chair Gkioulidou M.	
18.00 - 18.20	Dialynas K.	<i>Energetic H+ and O+ Moments and Polytropic Index in the Kronian Magnetosphere...</i>		
18.20 - 18.40	Ntormousi E.	<i>Global MHD galaxy simulations: feedback, non-equilibrium chemistry and the</i>		
18.40 - 19.05	Vallianatos F.	<i>Gutenberg-Richter, Omori and Cumulative Benioff strain patterns in view of</i>		
19.05 - 19.25	Ellinas D.	<i>Quantum computational approach based on quantum κ-entropy</i>		
19.25 - 19.45	Kalogeropoulos N.	<i>Power law entropies for parabolic systems?</i>		
19.45 - 20.10	Sarlis N.	<i>Recent advances on statistical physics of earthquakes by combining natural time....</i>		