

# MONDAY

## Plenary

## Welcome Addresses & Opening Ceremony (Room KERKIRA)

Monday 10

11.30 - 11.40	<b>Kaniadakis G.</b>	Conference Chairman	Chair
11.40 - 11.45	<b>Major of Corfu</b>	Corfu Municipality	Argyarakis P.
11.45 - 11.50	President of the Region	Region of Ionian Islands	
11.50 - 12.00	<b>Beck C.</b>	European Physical Society - Nonlinear and Statistical Physics Division Chair	
12.00 - 12.15	<b>Sourlas N.</b>	Sigmaphi Prize Ceremony	
12.30 - 12.45	<b>Group Photo</b>		
13.00 - 15.00	<b>Break</b>		

## Area A

## MAIN CONFERENCE (Room KERKIRA)

Monday 10

15.00 - 15.30	<b>Nowak M.</b>	<i>Burgulence in random matrix theories</i>	Chair
15.30 - 16.00	<b>Kastner M.</b>	<i>Measuring 2-time correlation functions in many-body quantum systems</i>	Corberi F.
16.00 - 16.20	<b>Wlodarczyk Z.</b>	<i>Oscillation phenomena in multiparticle production processes</i>	
16.20 - 16.40	<b>Kosztolowicz T.</b>	<i>Subdiffusion-reaction process in a composite system with a thin membrane</i>	
16.40 - 17.00	<b>Tatsuta M.</b>	<i>Thermal equilibrium states into superpositions of macroscopically distinct states</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 17.50	<b>Corberi F.</b>	<i>Coarsening and percolation in a disordered ferromagnet</i>	Chair
17.50 - 18.10	<b>Corominas-Murtra B.</b>	<i>Sample space reducing process and the emergence of arbitrary scaling exponents</i>	Nowak M.
18.10 - 18.30	<b>Dantchev D.</b>	<i>Manipulation and amplification of the Casimir force in systems with continuous...</i>	

## Area A

## MAIN CONFERENCE (Room NAUSICA)

Monday 10

15.00 - 15.30	<b>Spagnolo B.</b>	<i>Driven quantum metastable states: stabilization by dissipation and resonant ....</i>	Chair
15.30 - 16.00	<b>Ganapol B.</b>	<i>A mathematical realization of entropy through neutron slowing down</i>	Delfino G.
16.00 - 16.20	<b>Hakoshima H.</b>	<i>Quasi volume law of entanglement entropy in nonequilibrium steady states</i>	
16.20 - 16.40	<b>Hanel R.</b>	<i>History dependence and entropy How one can use entropy to solve Polya</i>	
16.40 - 17.00	<b>Khveshchenko D.V.</b>	<i>Geometric aspects of thermodynamics and transport in strongly correlated matter</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 17.50	<b>Guevara E.</b>	<i>Finite-time and -size scalings in the evaluation of large deviation functions....</i>	Chair
17.50 - 18.10	<b>Delfino G.</b>	<i>Exact results for quenched disorder at criticality</i>	Spagnolo B.
18.10 - 18.30	<b>Hamazaki R.</b>	<i>Generalized Gibbs ensemble in nonintegrable systems with an extensive....</i>	
18.30 - 18.50	<b>Schertzer D.</b>	<i>Cascades, Lévy-Clifford algebra of generators of vector multifractals to ....</i>	

## Area B

## MAIN CONFERENCE (Room ITHACA)

Monday 10

15.00 - 15.30	<b>Hansen A.</b>	<i>Statistical mechanics of porous media flow</i>	Chair
15.30 - 16.00	<b>Leuzzi L.</b>	<i>Statistical physics insight into photonics: light amplification and propagation...</i>	Tuckerman L.
16.00 - 16.20	<b>Lowen H.</b>	<i>Statistical physics of active matter: microswimmers in complex environments</i>	
16.20 - 16.40	<b>Caravelli F.</b>	<i>Non-equilibrium properties of memristive circuits</i>	
16.40 - 17.00	<b>Bernaschi M.</b>	<i>Efficient detection of plastic events in emulsions simulations</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	<b>Tuckerman L.</b>	<i>Can frequencies be predicted from mean flows?</i>	Chair
18.00 - 18.20	<b>Krcelic H.</b>	<i>Modelling nanostructure growth on a one-dimensional substrate: islands,....</i>	Hansen A.
18.20 - 18.40	<b>Bohinc K.</b>	<i>The interaction between like-charged colloids mediated by multivalent, stiff...</i>	

## Area C

## MAIN CONFERENCE (Room LEUCAS)

Monday 10

15.00 - 15.30	<b>Di Matteo T.</b>	<i>Predictive modeling for a complex world: a data-driven perspective</i>	Chair
15.30 - 16.00	<b>Aste T.</b>	<i>Forecasting financial markets by means of information filtered graphs</i>	Neda Z.
16.00 - 16.20	<b>Burridge J.</b>	<i>Spatial evolution of human dialects</i>	
16.20 - 16.40	<b>Chu D.</b>	<i>Microscopic computation by biochemical systems</i>	
16.40 - 17.00	<b>Cimini G.</b>	<i>Entangling credit and funding shocks in interbank markets</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 17.50	<b>Zaccaria A.</b>	<i>Liquidity crises in the limit order book: a tale of two time scales</i>	Chair
17.50 - 18.10	<b>Tacchella A.</b>	<i>The language of innovation</i>	Aste T.
18.10 - 18.30	<b>Roman S.</b>	<i>Dynamical system modelling of human-environment interactions: the case ....</i>	
18.30 - 18.50	<b>Neda Z.</b>	<i>Ruin game on random graphs</i>	

14.50 - 15.00	<b>Livadiotis G.</b>	<i>Session presentation</i>	<b>Chair</b>
15.00 - 15.30	<b>Moussas X.</b>	<i>Determining the q-index of heliospheric particle populations during three ...</i>	<b>Summer D.</b>
15.30 - 16.00	<b>Martinović M.</b>	<i>Kappa parameter estimations using quasi-thermal noise spectroscopy</i>	
16.00 - 16.30	<b>Nicolaou G.</b>	<i>Determining the kappa index of space plasma distributions from observations...</i>	
16.30 - 17.00	<b>Sarlis N.</b>	<i>Statistical physics of earthquakes: Natural time analysis and Tsallis non-...</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	<b>Dzifcakova E.</b>	<i>Theory and diagnostics of the kappa-distribution in the solar atmosphere</i>	<b>Chair</b>
18.00 - 18.30	<b>Vocks C.</b>	<i>Suprathermal electrons in the solar corona and transition region</i>	<b>Mace R.</b>
18.30 - 19.00	<b>Kuznetsov A.</b>	<i>Diagnosing kappa distribution in the solar corona with the polarized microwave...</i>	
19.00 - 19.30	<b>Gontikakis G.</b>	<i>Influence of particle acceleration on the heating of the solar coronal plasma ...</i>	

## TUESDAY

### Plenary

### MAIN CONFERENCE (Room Kerkira)

Tuesday 11

08.30 - 09.10	Ruffo S.	<i>Out-of-equilibrium physics in spontaneous synchronization</i>	Chair
09.10 - 09.50	Metzler R.	<i>Anomalous diffusion in membranes and cytoplasm of biological cells</i>	Gudowska-N E.
09.50 - 10.30	Mukamel D.	<i>Temperature profile and boundary condition in anomalous heat transport</i>	

### Special Section A1

### MAIN CONFERENCE (Room Kerkira)

Tuesday 11

Coffee break			
10.30 - 11.00			
11.00 - 11.30	Imparato A	<i>Autonomous thermal motors</i>	Chair
11.30 - 12.00	Dettmann C.	<i>Isolation statistics in temporal spatial networks</i>	Talbot J.
12.00 - 12.30	Toral R.	<i>Scaling of consensus times in the biased-voter model</i>	
12.30 - 13.00	Vallet A.	<i>Semiconductor laser Markov models in the micro-canonical, canonical and....</i>	
13.00 - 13.30	Volmer J.	<i>Time autocorrelations. Slice map and Levy-Lorentz gas</i>	
13.00 - 15.00	Break		

### Area A

### MAIN CONFERENCE (Room NAUSICA)

Tuesday 11

Coffee break			
10.30 - 11.00			
11.00 - 11.30	Hucht F.	<i>The square lattice Ising model on the rectangle</i>	Chair
11.30 - 12.00	Field T.	<i>Dynamical theory of spin noise and relaxation - Beyond extreme narrowing</i>	Pistone G.
12.00 - 12.20	Fronczak A.	<i>Mixed-order phase transition in a minimal, diffusion based spin model</i>	
12.20 - 12.40	Strecka J.	<i>Strong and weak-universal critical behaviour of a mixed-spin Ising model ....</i>	
12.40 - 13.00	Vlad M.	<i>Quasi-coherent aspects in turbulent transport</i>	
13.00 - 15.00	Break		

### Area B

### MAIN CONFERENCE (Room ITHACA)

Tuesday 11

Coffee break			
10.30 - 11.00			
11.00 - 11.30	Boettcher S.	<i>Record dynamics as the origin of aging</i>	Chair
11.30 - 12.00	Hof B.	<i>Percolation transition to turbulence</i>	Spagnolo B.
12.00 - 12.20	Nahas Y.	<i>Emergent Berezinskii-Kosterlitz-Thouless phase in low-dimensional ferroelectrics</i>	
12.20 - 12.40	Schreiber N.	<i>Monte Carlo study of four states four body interaction Potts models</i>	
12.40 - 13.00	Shena J.	<i>Turbulent chimeras in large semiconductor laser arrays</i>	
13.00 - 15.00	Break		

### Area C

### MAIN CONFERENCE (Room LEUCAS)

Tuesday 11

Coffee break			
10.30 - 11.00			
11.00 - 11.30	Gabrielli A.	<i>Detecting early signs of the 2007-2008 crisis in the world trade</i>	Chair
11.30 - 12.00	Mendes J.	<i>A unified approach to percolation processes on multiplex networks</i>	Mantegna R.
12.00 - 12.20	Collet B.	<i>Random walks on regular networks generated by fractional Laplacian matrices</i>	
12.20 - 12.40	Constantoudis V.	<i>The multiple faces of spatial complexity: From galaxies to cities and to nanostructures</i>	
12.40 - 13.00	Mariani M.	<i>Early identification of significant nodes in growing networks</i>	
13.00 - 15.00	Break		

### Workshop 5

### Complexity and self-organization in biology and physiology (Room Krokidis)

Tuesday 11

Coffee break			
10.30 - 11.00			
11.00 - 11.25	Lombardi A.	<i>Multidimensional complex measures for functional connectivity analysis</i>	Chair
11.25 - 11.50	Sung J.	<i>Chemical fluctuation theorem for vibrant reaction networks in living cells</i>	Paradisi P.
11.50 - 12.15	Montakhab A.	<i>Refractory period in a network of excitable nodes leads to dynamical stability...</i>	
12.15 - 12.40	Mazzolini A.	<i>How the abundance in the universe of components determines the statistics...</i>	

**Special Section A1****MAIN CONFERENCE (Room Kerkira)**

Tuesday 11

15.00 - 15.30	Cao F.	<i>Spatial scales of population fluctuations of two species ecosystems: effects ....</i>	Chair
15.30 - 16.00	Polettini M.	<i>Marginal time-reversal and effective fluctuation relations</i>	Mejia-M. C.
16.00 - 16.30	Shinagawa R.	<i>Diffusion enhancement of chemically driven molecular motors</i>	
16.30 - 17.00	Vasilyev O.	<i>Survival of a lazy evasive prey: modest effort, high succes</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	Ooshida T.	<i>Collective motion of repulsive Brownian particles in single-file diffusion with...</i>	Chair
18.00 - 18.30	Mejia-Monasterio C.	<i>Negative response to an excessive bias by a mixed population of voters</i>	Cao F.
18.30 - 19.00	Talbot J.	<i>Effect of crowding and confinement on first passage processes</i>	

**Area A****MAIN CONFERENCE (Room NAUSICA)**

Tuesday 11

15.00 - 15.30	Shimizu A.	<i>Entanglement entropy of nonequilibrium steady states</i>	Chair
15.30 - 16.00	Fagotti M.	<i>Intermediate-time dynamics in out-of-equilibrium spin chains</i>	Ejtehadi M.
16.00 - 16.20	Savvidy G.	<i>Hyperbolic Anosov C-systems. Exponential decay of correlation functions</i>	
16.20 - 16.40	Lee S.	<i>Absorbing phase transition in continuous media</i>	
16.40 - 17.00	Pankratov A.	<i>Noise-induced effects in Josephson junction arrays</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	Ejtehadi M.	<i>Continuum equations of active matter based on Gaussian approximation</i>	Chair
18.00 - 18.30	Monasson R.	<i>Emergence of compositional representations in restricted Boltzmann machines</i>	Shimizu A.

**Workshop 2****Statistical Physics for the Digital Economy (Room ITHACA)**

Tuesday 11

15.00 - 15.30	Olsen R.	<i>Alpha Engine: designing an automated trading engine</i>	Chair
15.30 - 16.00	Tasca P.	<i>Technical, legal and business challenges faced by Blockchain enabled systems</i>	Aste T.
16.00 - 16.30	Caccioli F.	<i>Excess reciprocity distorts reputation in online social networks</i>	
16.30 - 17.00	Cimini G.	<i>Algorithms for reputation and quality in scientific e-communities</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	Mantegna R.	<i>Price discovery and market liquidity at NASDAQ Nordic OMX exchanges</i>	Chair
18.00 - 18.30	Takayasu H.	<i>Transition between Poisson and non-Poisson fluctuations in sales numbers</i>	Livan G.
18.30 - 19.00	Squartini T.	<i>Maximum-entropy models for networks</i>	
19.00 - 19.30	Poledna S.	<i>An empirically calibrated large-scale agent-based model for an entire national...</i>	
19.30 - 20.00	Caldarelli G.	<i>Financial Networks</i>	

**Workshop 5****Complexity and self-organization in biology and physiology (Room LEUCAS)**

Tuesday 11

15.00 - 15.25	Oliveira F.	<i>Pattern-non-pattern transition for a nonlocal population dynamics</i>	Chair
15.25 - 15.50	Pankratova E.	<i>Drift velocity of bacterial chemotactic response with two alternating turning...</i>	Metzler R.
15.50 - 16.15	Sevilla F.	<i>The underlying non-equilibrium features of trapped active swimmers</i>	
16.15 - 16.40	Kharcheva A.	<i>Statistical analysis of NIH 3T3 prbroblasts motility</i>	
16.40 - 17.00	Burov S.	<i>Effective potential for cellular size control</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 17.50	Gaudiano M.	<i>On a cancer discrete-continuous model that explains Peto's paradox</i>	Chair
17.50 - 18.10	Deroulers C.	<i>Oscillations and waves in populations of cells which tend to homeostasis</i>	Paradis P.
18.10 - 18.30	Metzler R.	<i>Gene regulation and facilitated diffusion</i>	
18.30 - 18.50	Ochab-Marcinek A.	<i>Gene regulation as a nonlinear noise filter</i>	
18.50 - 19.10	Buyukdagli S.	<i>Electrostatic correlation-induced like-charge macromolecular attraction</i>	

15.00 - 15.30	McComas D.	<i>Interstellar boundary explorer (IBEX) overview and recent results</i>	Chair
15.30 - 16.00	Pierrard V.	<i>Characteristics of electron velocity distributions in space plasmas</i>	Kucharek H.
16.00 - 16.30	Salem C.	<i>In-situ observations of solar wind electrons: Interplay between thermal core...</i>	
16.30 - 17.00	Wang L.	<i>Solar wind suprathermal electrons</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	Chapman S.	<i>Data quantile-quantile plots: model independent quantification of the ....</i>	Chair
18.00 - 18.30	Vörös Z.	<i>Non-extensive approach to collisionless magnetic reconnection</i>	Fleishman G.
18.30 - 19.00	Dialynas K.	<i>Kappa distributions in Saturn's magnetosphere: a model for the energetic ion....</i>	
19.00 - 19.30	Ogasawara K.	<i>Properties of suprathermal electrons associated with discrete auroral arcs</i>	

20.00 - 22.00

**Board Meeting of the NSP-EPS****Nonlinear and Statistical Physics Division of the European Physical Society**

# WEDNESDAY

## Plenary

## MAIN CONFERENCE (Room KERKYRA)

Wednesday 12

08.30 - 09.10	<b>Beck C.</b>	<i>Complex systems in heterogeneous environments</i>	<b>Chair</b>
09.10 - 09.50	<b>Toral R.</b>	<i>Role of heterogeneity in stochastic agent-based models</i>	<b>Chapman S.</b>
09.50 - 10.30	<b>Sourlas N.</b>	<i>Recent progress in the Random Field Ising model</i>	

## Area A

## MAIN CONFERENCE (Room KERKIRA)

Wednesday 12

10.30 - 11.00 <b>Coffee break</b>			
11.00 - 11.30	<b>Topsøe F.</b>	<i>Philosophy of information, some thoughts</i>	<b>Chair</b>
11.30 - 12.00	<b>Boettcher S.</b>	<i>Exploring quantum search algorithms with the renormalization group</i>	<b>Toral R.</b>
12.00 - 12.20	<b>Caruso F.</b>	<i>Quantum sensing by stochastic quantum Zeno</i>	
12.20 - 12.40	<b>Korniyak V.</b>	<i>Quantum models based on finite groups: statistical description</i>	
12.40 - 13.00	<b>de los Santos F.</b>	<i>Time scales at quantum phase transitions</i>	
13.00 - 13.20	<b>de Lillo S.</b>	<i>On the learning dynamics of complex living systems</i>	

Break

## Area B

## MAIN CONFERENCE (Room NAUSICA)

Wednesday 12

10.30 - 11.00 <b>Coffee break</b>			
11.00 - 11.30	<b>Martín-Mayor V.</b>	<i>Matching microscopic and macroscopic responses in glasses with the Janus II....</i>	<b>Chair</b>
11.30 - 12.00	<b>Barkley D.</b>	<i>Directed percolation and the onset of turbulence in shear flows</i>	<b>Kourakis I.</b>
12.00 - 12.20	<b>Nizovtseva I.</b>	<i>Methods of traveling waves in solutions of hyperolic phase field equation</i>	
12.20 - 12.40	<b>Prokhorenko S.</b>	<i>Fluctuations and topological defects in ferroelectrics</i>	
12.40 - 13.00	<b>Rath C.</b>	<i>Synchronization in systems with linear, yet nonreciprocal interactions</i>	

13:00

Break

## Area C

## MAIN CONFERENCE (Room ITHACA)

Wednesday 12

10.30 - 11.00 <b>Coffee break</b>			
11.00 - 11.30	<b>Saad D.</b>	<i>Topology, dynamics and the optimisation of spreading processes</i>	<b>Chair</b>
11.30 - 11.50	<b>Dettmann C.</b>	<i>Spatial networks with random connections</i>	<b>Squartini T.</b>
11.50 - 12.10	<b>Ghanbarnejad F.</b>	<i>Where higher order of interactions matters?</i>	
12.10 - 12.30	<b>Ioannidis E.</b>	<i>Positioning experts in knowledge networks</i>	
12.30 - 12.50	<b>Zaccaria A.</b>	<i>Following the product progression network to escape from the poverty trap</i>	
12.50 - 13.10	<b>Antoniou I.</b>	<i>Torus random numbers generators</i>	

13.10 - 13.30

## Panel discussion of Publishers

**Chair**  
**Spagnolo B.**

13:30

Break

## Workshop 4

## Statistical Physics of Environment, Climate and Ecosystems (Room LEUCAS)

Wednesday 12

10.30 - 11.00 <b>Coffee break</b>			
11.00 - 11.20	<b>Ghil M.</b>	<i>The physics of climate sensitivity: a tale of deterministic and stochastic ...</i>	<b>Chair</b>
11.20 - 11.40	<b>Stainforth D.</b>	<i>Climate Prediction in Model Land: On the roles of initial condition uncertainty...</i>	<b>Hristopoulos D.</b>
11.40 - 12.00	<b>Ditlevsen P.</b>	<i>Identifying the dynamics of abrupt climate changes using high resolution ice...</i>	
12.00 - 12.20	<b>Bianucci M.</b>	<i>Large scale Geophysical phenomena as emerging properties from fast complex...</i>	
12.20 - 12.40	<b>Modest H.</b>	<i>Nonlinear time series analysis of atmospheric gravity waves</i>	
12.40 - 13.00	<b>Laepfle T.</b>	<i>Space-time structure of climate variability</i>	

13:00

Break

**Workshop 6****Sociophysics and Econophysics (Room KROKIDIS)**

Wednesday 12

10.30 - 11.00

**Coffee break**

11.00 - 11.20	Asimakopoulos A.	<i>Multifractal urban morphology of historic city centers and of typical ...</i>	Chair
11.20 - 11.40	Neirotti J.	<i>Consensus formation times in anisotropic societies</i>	Modanese G.
11.40 - 12.00	Prenga D.	<i>An approach for early stage of opinion formation</i>	
12.00 - 12.20	Ishii A.	<i>Effect of mass media, word-of-mouth and town umor in social media reputation...</i>	
12.20 - 12.40	Constantoudis V.	<i>Multifractal correlations in natural language written texts: Effects of language...</i>	
12.40 - 13.00	Yamada K.	<i>Dynamics of words popularity observed from large scale social data</i>	

13:00

**Break****Special Section A3****MAIN CONFERENCE (Room KERKIRA)**

Wednesday 12

15.00 - 15.25	Ruppeiner G.	<i>Extension of black hole thermodynamics with information geometry</i>	Chair
15.25 - 15.50	Banerjee R.	<i>Thermogeometric phase transition in a unified framework</i>	Naudts J.
15.50 - 16.10	Sahay A.	<i>Ruppeiner geometry and thermodynamic ensembles of anti-de Sitter black holes</i>	
16.10 - 16.35	Kalogeropoulos N.	<i>Non-additive entropies for black holes?</i>	
16.35 - 17.00	Tanaka M.	<i>Tau-information geometry and entropy</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 17.55	Mancini S.	<i>The volume of Gaussian states by information geometry</i>	Chair
17.55 - 18.15	Pistone G.	<i>Second order structure of a finite sample space exponential manifold</i>	Ruppeiner G.
18.15 - 18.35	Ohara A.	<i>Doubly autoparallelism on the space of probability distributions</i>	
18.35 - 18.55	Henmi M.	<i>Statistics of the generalized maximum likelihood estimation in deformed....</i>	
18.55 - 19.20	Matsuzoe H.	<i>Unbiasedness of generalized score functions and sequential structures of expectations</i>	
19.20 - 19.40	Naudts J.	<i>Dually flat geometries in the state space of statistical models</i>	
19.40 - 20.00	Wada T.	<i>Information geometry on the thermal probability distributions for a weakly....</i>	

**Workshop 2****Statistical Physics for the Digital Economy (Room NAUSICA)**

Wednesday 12

15.00 - 15.30	Kondor I.	<i>Variance optimization with no short positions</i>	Chair
15.30 - 16.00	Pietronero L.	<i>Firms Complexity: Technological Scope, Coherence and Performance</i>	Di Matteo T.
16.00 - 16.30	Takayasu M.	<i>Growth dynamics of complex business firms network</i>	
16.30 - 17.00	Wilinski M.	<i>Intraday correlation structure for high frequency financial data</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	Jensen H.	<i>Evolutionary dynamics of neighborhood economic status in cities</i>	Chair
18.00 - 18.30	Gabrielli A.	<i>The scientific and technological competitiveness of nations: a network analysis</i>	Caldarelli G.
18.30 - 19.00	Rapisarda A.	<i>A multilayer approach for price dynamics in financial markets</i>	
19.00 - 19.30	Petri G.	<i>Topological data analysis for complex systems</i>	

**Workshop 4****Statistical Physics of Environment, Climate and Ecosystems (Room ITHACA)**

Wednesday 12

15.00 - 15.30	Provata A.	<i>Chimera states in oscillatory dynamics</i>	Chair
15.30 - 16.00	Biswas S.	<i>Predicting failure in power grids</i>	Ghil M.
16.00 - 16.30	Valenti D.	<i>Picophytoplankton dynamics and chlorophyll distributions in a 2D spatial ...</i>	
16.30 - 17.00	Watkins N.	<i>Generalised and fractional Langevin equations-Implications for energy balance models</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	Dubkov A.	<i>Exact results for steady-state probability characteristics of Verhulst and ....</i>	Chair
18.00 - 18.30	Freund J.	<i>Stochastic community dynamics and time scale dependent turnover rates</i>	Valenti D.
18.30 - 19.00	Hristopoulos D.	<i>A Connection between the damped harmonic oscillator in a heat bath and ...</i>	
19.00 - 19.30	Blesic S.	<i>Changes in the long-term properties of the Danube river flow induced by damming</i>	
19.30 - 20.00	Zukovic M.	<i>Modified planar rotator model for efficient gapfilling in spatial data</i>	

**Workshop 6****Sociophysics and Econophysics (Room LEUCAS)**

Wednesday 12

15.00 - 15.20	Roman S.	<i>Topology-dependent rationality and quantal response equilibria in structured....</i>	Chair
15.20 - 15.40	Squartini T.	<i>Inferring monopartite projections of bipartite networks: an entropy-based ...</i>	Costantoudis V.
15.40 - 16.00	Limnaios S.	<i>Network representation of geographical landscape data and their correlation...</i>	
16.00 - 16.20	Bertotti M.L.	<i>Economic inequality: a moral and political issue that statistical physics may ...</i>	
16.20 - 16.40	Modanese G.	<i>Statistics of correlations and fluctuations in a stochastic model of wealth ....</i>	
16.40 - 17.00	Lillo F.	<i>When panic makes you blind: a chaotic route to systemic risk</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 17.50	Raducha T.	<i>Statistical mechanics approach to coevolving spin system</i>	Chair
17.50 - 18.10	Ohnishi T.	<i>Using network motif analysis to characterize the international trade network</i>	Bertotti M.L.
18.10 - 18.30	Sorrentino F.	<i>Energy scaling in optimal control of networks</i>	

**Workshop 1****Kappa Distributions and Statistical Mechanics (Room KROKIDIS)**

Wednesday 12

15.00 - 15.30	Summers D.	<i>Effects of kappa distributions on radiation belt dynamics</i>	Chair
15.30 - 16.00	Mace R.	<i>Linear waves and instabilities in plasmas with kappa velocity distributions</i>	Ogasawara K.
16.00 - 16.30	Kourakis I.	<i>On the modelling principles of electrostatic solitary waves and shocks in...</i>	
16.30 - 17.00	Devanandhan S.	<i>Ion acoustic solitary waves in space plasmas having kappa velocity distributed...</i>	
17.00 - 17.30	<b>Coffee break</b>		
17.30 - 18.00	Consolini G.	<i>Inhomogeneity and dynamical complexity in space plasmas</i>	Chair
18.00 - 18.30	Kucharek H.	<i>Kappa distributions and their relation to wave-particle interactions and ....</i>	Dialynas K.
18.30 - 19.00	Cui X.	<i>X-Ray spectra from plasmas with high-energy electrons: Kappa-distributions...</i>	
19.00 - 19.30	Fleishman G.	<i>Kappa distribution and active regions at the sun: probing with microwave</i>	



# THURSDAY

## Plenary

## MAIN CONFERENCE (Room KERKIRA)

Thursday 13

08.30 - 09.10	Pietronero L.	<i>Economic complexity</i>	Chair
09.10 - 09.50	Luczka J.	<i>Long-lasting but transient anomalous diffusion</i>	Gupte N.
09.50 - 10.30	Gudowska-Nowak E.	<i>Nonequilibrium properties of Levy noises</i>	

## Special Section A2

## MAIN CONFERENCE (Room KERKIRA)

Thursday 13

10.30 - 11.00	Coffee break		
11.00 - 11.30	Anwasia B.	<i>Reaction diffusion limit of a kinetic model for chemically reactive gas mixtures</i>	Chair
11.30 - 12.00	Carvalho F.	<i>Numerical results for a bidimensional stability analysis of detonation waves</i>	Bisi M.
12.00 - 12.30	Hristopoulos D.	<i>Study of nonlinear kinetic equation for grain growth</i>	
12.30 - 13.00	Polewczak J.	<i>New kinetic models of dense reactive and inert mixtures</i>	
13.00 - 15.00	Break		

## Area B

## MAIN CONFERENCE (Room NAUSICA)

Thursday 13

10.30 - 11.00	Coffee break		
11.00 - 11.30	Donev A.	<i>Fluctuating hydrodynamics of complex fluid mixtures</i>	Chair
11.30 - 11.50	Spineanu F.	<i>Clusters of helicity and stochastic linking number generation in plasma</i>	Livadiotis G.
11.50 - 12.10	Tarasevich Yu.	<i>Electrical conductivity of a monolayer of rod-like particles: a lattice approach</i>	
12.10 - 12.30	Tarasov S.	<i>Self-similarity of critical phenomena and their dependence on the boundary...</i>	
12.30 - 12.50	Tsori Y.	<i>Prewetting transition in electric field gradients</i>	
12.50 - 15.00	Break		

## Area C

## MAIN CONFERENCE (Room ITHACA)

Thursday 13

10.30 - 11.00	Coffee break		
11.00 - 11.20	Gupte N.	<i>Synchronization and finite size scaling on hierarchical lattices</i>	Chair
11.20 - 11.40	Mariani M.	<i>A time-respecting null model to explore the structure of growing complex networks</i>	Palmisano C.
11.40 - 12.00	Argyarakis P.	<i>K-shell decomposition method applied in patent citation network</i>	
12.00 - 12.20	Michelitsch T.	<i>A matrix function approach with analysis of fractional random walks on regular...</i>	
12.20 - 12.40	Mizuno T.	<i>Exploiting global buyer-supplier networks to improve supply chain due diligence</i>	
12.40 - 13.00	Hoell M.	<i>General theory of detrending-operation-based scaling analysis methods and ...</i>	
13.00 - 15.00	Break		

## Workshop 3

## Quantum Matter (Room LEUCAS)

Thursday 13

10.30 - 11.00	Coffee break		
11.00 - 11.30	Ojanen T.	<i>Designer curved-space geometry for relativistic fermions in Weyl metamaterials</i>	Chair
11.30 - 12.00	Kioussis N.	<i>Search for novel topological Weyl semimetal phases</i>	Kourtis S.
12.00 - 12.30	Hermanns M.	<i>Classification of 3D Kitaev spin liquids</i>	
12.30 - 13.00	Rajabpour M.	<i>Formation probabilities, Post-measurement entanglement entropy and Casimir effect</i>	
13.00 - 15.00	Break		

## Workshop 1

## Kappa Distributions and Statistical Mechanics (Room KROKIDIS)

Thursday 13

10.30 - 11.00	Coffee break		
11.00 - 11.30	Watkins N.	<i>Long range dependence, fractional renewal models, and Bayesian inference</i>	Chair
11.30 - 12.00	Curado E.	<i>Consistent thermodynamic framework for a nonextensive system and the ....</i>	Nicolaou G.
12.00 - 12.30	Pavlos G.	<i>Non-extensive statistical analysis of magnetic field during the March 2012...</i>	
12.30 - 13.00	Kalogeropoulos N.	<i>The Legendre transform and non-additive entropies</i>	
13.00 - 15.00	Break		

15.00 - 15.30	Soares A.	<i>Transport properties in chemically reactive mixtures of dilute gases</i>	Chair
15.30 - 16.00	Bisi M.	<i>Kinetic models and hydrodynamic limits for reacting mixtures of polyatomic gases</i>	Polewczak J.
16.00 - 16.30	Cao F.	<i>Mechanics, thermodynamics and kinetics of ligand binding to biopolymers</i>	
16.30 - 17.00	Garzò V.	<i>Transport in sheared granular suspensions</i>	
17.00 - 17.30	<b>Coffee break</b>		

## Workshop 3

## Quantum Matter (Room LEUCAS)

Thursday 13

15.00 - 15.30	Plumb N.	<i>A different route to unconventional superconductivity: new spectroscopy ...</i>	Chair
15.30 - 16.00	Castelnovo C.	<i>D-wave superconductivity in boson+fermion dimer models</i>	Ellinas D.
16.00 - 16.30	Chandran A.	<i>Thermal inclusions in the many-body localized phase in higher dimensions</i>	
16.30 - 17.00	Neupert T.	<i>Probing many-body localization with neural networks</i>	
17.00 - 17.30	<b>Coffee break</b>		

17.30 - 18.00	Jarvis P.	<i>Parameter estimation via reluctant discrete quantum walks: an operational ...</i>	Chair
18.00 - 18.20	Berec V.	<i>Quantum walk algorithm in chaos based cryptography</i>	Kourtis S.
18.20 - 18.40	Ellinas D.	<i>Separable Qubit X States Statistics: A Lattice Quantum Simulator</i>	
18.40 - 19.00	Sotiriadis S.	<i>Equilibration, memory loss and memory preservation in one-dimensional</i>	
19.00 - 19.20	Carollo A.	<i>Geometry of dissipative driven phase transitions</i>	

## Workshop 1

## Kappa Distributions and Statistical Mechanics (Room KROKIDIS)

Thursday 13

15.00 - 15.30	Mejia-Monasterio C.	<i>From Hamilton to Boltzmann: The dynamical road toward equilibrium</i>	Chair
15.30 - 16.00	Nicolaou G.	<i>Plasma temperature misestimation when the Maxwell distribution is assumed ...</i>	Gontikakis G.
16.00 - 16.30	Livadiotis G.	<i>Kappa distributions: Theory and applications in plasmas</i>	
16.30 - 17.00	Du J.	<i>The nonextensive parameter for the rotating astrophysical systems with ...</i>	
17.00 - 17.30	<b>Coffee break</b>		

17.30 - 19.00	<b>Poster Session</b>		Thursday 13 Provata A.
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19.00 - 20.00	Moussas X.	<b>MAIN CONFERENCE (Room KERKIRA)</b> <b><i>The Antikythera mechanism: The oldest tablet of the second century B.C.</i></b>	Chair Livadiotis G.
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20:00	<b>Social Event</b>		
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# FRIDAY

## Plenary

## MAIN CONFERENCE (Room KERKIRA)

Friday 14

08.30 - 09.10	<b>Chapman S.</b>	<i>Dynamical Networks characterization of natural data: space weather events....</i>	<b>Chair</b>
09.10 - 09.50	<b>Manneville P.</b>	<i>Laminar-turbulent patterning in transitional</i>	<b>Di Matteo T.</b>
09.50 - 10.30	<b>Marinari E.</b>	<i>A difficult choice for a bacterium: Escherichia coli's decision between fermentation ....</i>	

10.30 - 11.00 **Coffee break**

11.30 - 13.00 **Closing Ceremony (Room KERKIRA)** Friday 14

**SigmaPhi Awards** **Chair**  
**Argyarakis P.**

13:00 **Break**

## Poster Section

Posters will be exposed in the hall from Tuesday 08.30 to Thursday 13.00

Poster discussion will be held Thursday from 17.30 - 19.00

	<i>Effect of clasterization and disorder-order transition in undercooled liquid on....</i>
Amour R.	<i>Contribution of higher order correction to nonlinear dust acoustic soliton in dusty plasma with ....</i>
Benzekka M.	<i>Dust acoustic dressed solitons in dusty plasma in the presence of polarization force</i>
Cao F.	<i>Information and thermodynamics of feedback controlled systems</i>
Chacòn-Acosta G.	<i>Effect of savings on a gas-like model of economy with credit and debt</i>
Chae H.	<i>Analysis of enhancement in game system with the random walk model</i>
Confesor M.	<i>Dynamics of a probe pushed by Physarum polycephalum under electrotaxis</i>
da Silva M.	<i>Study of the behavior of the persistence length in self-avoiding random walks using the Pivot algorithm</i>
de la Torre S.	<i>Communities' detection and dynamics: Estonian economic network of payments</i>
Dénes K.	<i>Kuramoto oscillators in a ring-like topology</i>
Dubinín N.	<i>The RPA correction to the Helmholtz free energy of simple liquid metals within variational calculations</i>
Dubkov A.	<i>Interdisciplinary applications of a periodically modulated Poisson noise process with regulated periodicity</i>
Dyer O.	<i>Wavelet Monte Carlo dynamics: hydrodynamics without the calculation</i>
Fronczak P.	<i>How transfer flights shape structure of the airline network</i>
Fujiki Y.	<i>Disassortative degree mixing and fractality of scale-free networks</i>
Galisova L.	<i>Ground-state and finite-temperature phase diagrams of the decorated Isingtriangular lattice in a .....</i>
Gervino G.	<i>Mechanical and chemical-diffusive instabilities in high density strange nuclear matter</i>
Karlova K.	<i>Stepwise magnetization curves and anomalous thermodynamics of an exactly solvable spin-1/2 Ising-....</i>
Kessal S.	<i>Soliton excitations in a polariton condensate with defects</i>
Kim J.	<i>Zero-temperature directed polymer in random potential on higher dimension</i>
Kim Y.	<i>Popularity dynamics and preference of memes on complex Networks</i>
Király B.	<i>Phase transitions in evolutionary games combining two or three pair coordinations on a square lattice</i>
Krawczyk M.	<i>Leader's benefits of network regeneration after consecutive splits</i>
Mizuguchi T.	<i>Rank-size distribution of person names and place names</i>
Mostacci D.	<i>State Equation of a relativistic ideal gas</i>
Moussas X.	<i>20 years of the Franco-Hellenic "Jean-Louis Steinberg" ARTEMIS solar radio spectrograph at thermopylae, Greece</i>
Nizovtseva I.	<i>Effect of clasterization and disorder-order transition in undercooled liquid on kinetics of solidification ....</i>
Ogasawara K.	<i>Challenges to measure kappa distributions in the terrestrial ionosphere</i>
Ogushi F.	<i>Analysis in structural features of polymer systems by persistent homology</i>
Paladi F.	<i>Two-order parameter model for phase transitions in the presence of an intermediate metastable state ....</i>
Palmisano C.	<i>Multidimensional integration and covariance matrix</i>
Park A.	<i>The analysis financial stability based investor trading behavior</i>
Persano Adorno D.	<i>Self-organization of cancerous cell populations in leukemia progression under targeted therapy</i>
Portesi M.	<i>An application of geometrization in generalized statistical mechanics</i>
Sabbagh H.	<i>A model for the diffusion of polymeric melts based on the generic van der Waals equation of state and ....</i>
Shima H.	<i>On the crack pattern formation in drying starch slurries</i>
Sliusarenko O.	<i>A novel model for anomalous transport in biological systems</i>
Spagnolo B.	<i>Noisy dynamics in long and short Josephson junctions</i>
Stefanovic D.	<i>Lattice gases with a point source and a tourist walk in one dimension</i>
Ueda M.	<i>Stronger selection can slow down evolution on smooth fitness landscapes under recombination</i>
Yakubo K.	<i>Fractality of complex networks emerging from self-organized critical dynamics</i>
Yi H.	<i>Quantum critical behavior of the quantum Ising model on fractal lattices</i>
Zoli M.	<i>DNA exibility at short length scales</i>