ΣΤΑΤΙΣΤΙΚΗ ΦΥΣΙΚΗ ΣΦ STATISTICAL PHYSICS 2017

International Conference on ΣΤΑΤΙΣΤΙΚΗ ΦΥΣΙΚΗ

Corfu-Greece 10-14 July 2017

ΣΦ Conference

SigmaPhi2014 Prizes
Founding Declaration
SigmaPhi 2017
SigmaPhi 2014
SigmaPhi 2011
SigmaPhi 2008
SigmaPhi 2005

ΣΦ 2017

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Topics and Format

The Conference is organized in the following three Areas to cover all the Topics of Statistical Physics:

Area A: Foundations and Theoretical aspects of classical, quantum and relativistic statistical physics and thermodynamics. Mathematical aspects and methods, formalism, rigorous results, exact solutions, connections with the methods of high energy physics, string theory, mathematical statistics and information theory, information geometry, classical, quantum and relativistic transport theory, Boltzmann and Fokker-Planck kinetics, nonlinear kinetics, dynamical systems, relaxation phenomena, random systems, pattern formation, fractal systems, solitons, chaotic systems, strongly correlated electrons, soft quantum matter, mesoscopic quantum phenomena, fractional quantum Hall effect, low dimensional quantum field theory, quantum phase transitions, quantum information and entanglement, power laws, stochastic optimal controletc.

Area B: Applications to Physical Systems: quantum systems, soft condensed matter, liquid crystals, plasmas, fluids, surfaces and interfaces, disordered and glassy systems, percolation, spin glasses, structural glasses, jamming, critical phenomena and phase transitions,fluids and interfacial phenomena, molecular and ionic fluids, metastable liquids, hydrodynamic instabilities, turbulence, growth processes, wetting, surface effects, films, crystals, confined systems, surfaces and interfaces, chemical reactions, cold atoms, etc.

Area C: Applications to non-Physical Systems: Interdisciplinary applications of statistical physics, networks and graphs, applied networks, biophysics, genomics, environments, climate and earth models, seismology, linguistics, econophysics, social systems, traffic flow, algorithmic problems, complex systems, nonlinear time-series analysis, novel data analysis tools, extreme events, tipping points, prediction, classification, etc.

Any area include several Sessions dealing with general aspects and applications.

Special sessions: Some special sessions within the thematic Area A will cluster talks dedicated to the following theoretical topics: **A1:** Stochastic Processes in Complex Environment; **A2:** Kinetic Theory and its applications; **A3:** Connections of Statistical Mechanics with Information Geometry.

Workshops: Some workshops will cluster talks dedicated to special applications of statistical physics in physical and non-physical systems and will be organized as parallel events.

Poster Sessions: The Conference will also include some poster sessions.

News

SigmaPhi Prize

The SigmaPhi Prize for 2017 will be awarded during SigmaPhi2017 Conference to Ralf Metzler, David Mukamel and Stefano Ruffo.

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Workshops

1. Kappa Distributions and Statistical Mechanics

Workshop organized by: G. Livadiotis, P. Yoon and K. Dialynas

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2. Statistical Physics for the Digital Economy

Workshop organized by: T. Aste, G. Caldarelli, T. Di Matteo and G. Livan

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Special Sessions

A1. Stochastic Processes in Complex Environments

Special Session organized by: J. Talbot and C. Mejia-Monasterio

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