CCP 2013 MOSCOW

XXV IUPAP Conference on Computational Physics

August 20-24, 2013

Computational physics is by now arguably a third branch of physics besides theoretical and experimental physics. The CCP Conference is a yearly conference organized by IUPAP Commission on Computational Physics (C20) and dedicated to presenting an overview of computational physics as it evolves and expands. Every three years it is taking place in Europe with support of European Physical Society. The conference will cover computational physics through a series of plenary talks, which together will form a broad and accessible overview of the field. Parallel sessions with invited and contributed talks as well as poster sessions will be formulated around the following topics and will be paying special attention to both numerical methods and physical results.

PLENARY TALKS:

Ali Alavi *(England) Quantum Monte Carlo approach to the ground state eigenvalue problem of many-electron systems*
Natalia Artemieva *(USA) Airbursts - from Tunguska to Chelyabinsk*
Kurt Binder *(Germany) Simulations of Interfacial Phenomena in Soft Condensed Matter and Nanoscience*
Ian T. Foster *(USA) Preparing for the Computer Revolution*
Antoine Georges *(France) To be confirmed*
Stefan Gottloeber *(Germany) Formation of structure in the Universe*
Morten Hjorth-Jensen *(Norway) Living at the edge of stability, understanding the limits of the nuclear landscape: Computational and algorithmic challenges*
Dezso Horvath (*Hungary) Search for the Higgs Boson: a Numerical Adventure of Exclusion and Discovery*
Isaak M. Khalatnikov (*Russia) Numerical Methods for Partial Differential Equations and Early Days of Computational Physics*
Wolfgang Paul *(Germany) Monte Carlo Simulations of Semi-flexible Polymers: From Single Chains to Nematic Melts*
Carlo Pierleoni *(Italy) First-principle calculations of high pressure hydrogen*
Tomo-Hiko Watanabe *(Japan) Exploring phase space turbulence in magnetic fusion plasmas*
Vladimir E. Zakharov *(USA) Numerical Modeling of Ocean Waves*

INVITED TALKS:

Norbert Attig *(Germany) Supercomputing Infrastructures in Europe*
Marcia Barbosa *(Brasil) Enhancement Flow in Nanoconfined Water*
Sara Bonella *(Italy) Quantum time correlation functions via noisy Monte Carlo and classical trajectories*
Wolfhard Janke *(Germany) title to be announced*
David Landau *(USA) A New Paradigm for Petascale Monte Carlo: Replica Exchange Wang-Landau Sampling*
Anthony Maggs *(France) Constrained statistical mechanics for charges and spins*
Vladimir Voevodin *(Russia) Supercomputing Center of Moscow State University: Computational Factory and Education*

IMPORTANT DATES:

Abstract submission: Opens: March 20 – Closes: June 10

VENUE:

Leninskiy prospect, 32-A, Moscow, Russia

TOPICS:

Statistical Physics & Complexity
Plasma Physics
High Energy Physics
Continuum Mechanics & Hydrodynamics
Condensed Matter & Material Science
Space Research &Astrophysics
Geo & Environmental Sciences
Soft Matter & Polymer Physics
IT & HPC for Physics and Education
Education on Computational Physics & rel. topics
Industrial & Transport Applications

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