

cHiPSet Training School 2016

Call for Trainers ***for the cHiPSet Training School 2016***

New Trends in Modeling and Simulation in HPC Systems

Bucharest, Romania, 21-23 September 2016

- <http://cipsm.hpc.pub.ro/chipset/> -

cHiPSet is promoting a Summer School on New Trends in Modeling and Simulation in HPC Systems. It mainly targets PhD students, researchers and skilled practitioners. The overarching aim is to improve participants' understanding of significant research methods commonly or increasingly used in the field of Modeling and Simulation (MS). Such enhanced understanding will enable them to select and combine appropriate research methods for their specific MS-related projects, with a special emphasis on *evaluation of HPC Systems* (the use of tools, models, methodologies, designed for the evaluation of such systems), and to contextualise them without unintended impacts on validity.

The training school within COST Action IC1406 features presentations and hands-on practice and demonstration of novel methods, mechanisms, techniques and technologies in Modelling and Simulation (MS), with a special emphasis on evaluation of HPC Systems. Today MS is widely considered the essential tool in science and engineering to substantiate the prediction and analysis of complex systems and natural phenomena. MS offers suitable abstractions to manage the complexity of analyzing Big Data in various scientific and engineering domains. Unfortunately, Big Data problems are not always easily amenable to efficient MS over HPC. Also, MS communities may lack the detailed expertise required to exploit the full potential of HPC solutions, and HPC architects may not be fully aware of specific MS requirements. Thus, the goal of the training school is to offer to participants coming from these two worlds the skills to understand and work with models and concepts coming from HPC, to design accurate modeling and simulation strategies for the evaluation of HPC solutions, to design, construct and use complex MS tools that capture many of the HPC modeling needs, from scalability to fault tolerance and beyond. At the end, participants will be able to efficiently turn massively large HPC data into valuable information and meaningful knowledge, with the help of covered new trends in MS.

This training event is sponsored by COST Action cHiPSet and co-organised by University Politehnica of Bucharest, Romania. This edition will take place in Bucharest, Romania from 21 to 23 September, 2016.

Call for Trainers

The pedagogical approach to this training school is problem-based learning. As such we welcome manifestations of interest from cHiPSet members will to contribute with a research challenge, relevant to cHiPSet, but suitable to be addressed from an Modeling and Simulation in HPC Systems perspective.

Up to 4 trainers will be sponsored (with up to 1000 EUR each) by the cHiPSet COST Action. Applicants from approved IPC institutions are also eligible for funding.

Manifestations of interest should include a short bio, a CV highlighting the expertise particularly in the topic proposed for teaching, the filled-in registration form available online, and a one-page description of the research challenge (title of proposed course, context setting, problem statement, goal(s) and possible research question(s)). Applications are accepted until **1 June 2016**.

The application should be sent, by email, to Ciprian Dobre (ciprian.dobre@cs.pub.ro), with CC to Sanja BRDAR (brdar.sanja@gmail.com), and Dzmityr KLIASOVICH (dzmitry.kliazovich@uni.lu).

Applicants can select from any of the following possible research challenges (but these are definitely not limited to the list, and we welcome new proposals coming from the focus of *using MS for the evaluation of HPC systems*):

- Modeling and simulation of Cyber Physical Systems
- Biologically Inspired Modeling and Simulation
- Advanced in Cloud and Grid Computing
- Social and Intelligent Networks / Simulation of Mobile Systems
- Data Intensive Computing and Data Mining / Security Awareness and Energy Effectiveness in Distributed Data
- Intelligent Mechanisms/Heuristics/Rules for Scheduling / Resource Allocation and Management in P2P, Grid, Cluster, Cloud Computing and Big Data oriented systems

The trainers will be allocated a half-day teaching slot, for the teaching and evaluation activities.

Inquiries (e-mail) can be forwarded electronically to any of the selection committee for the Training School:

- Ciprian DOBRE, University Politehnica of Bucharest, Romania (E-Mail: ciprian.dobre@cs.pub.ro)
- Sanja BRDAR, Faculty of Technical Sciences, Serbia
- Dzmityr KLIASOVICH, University of Luxembourg, Luxembourg
- Joanna KOLODZIEJ, Cracow University of Technology, Poland
- Horacio GONZALEZ-VELEZ, National College of Ireland, Ireland