Supercomputing gurus to meet in Trieste



Great interest in the workshop on High-Performance Computing

February 19, 2016

Over 160 registrants for HPC-TS, the meeting that from February 24 to 26 will bring to Trieste some of the world's leading names in "supercomputing", currently one of the most innovative fields in science. Key guest speaker will be Jack Dongarra (University of Tennessee), a world expert in high-performance computing (HPC). The event has been organized within the framework of the MHPC, the joint SISSA/ICTP master's course in HPC.

Gigantic computers able to process even more gigantic amounts of data, applied to the most diverse fields (naval design, biomedical research, astrophysics, computer graphics animations, big data analytics...): that's supercomputing. Trieste is becoming an important centre for the discipline: in September 2014, a collaboration between the International School for Advanced Studies (SISSA) and the Abdus Salam International Centre for Theoretical Physics (ICTP) gave rise

to the Master's course in HPC (MHPC) and at the same time the SISSA-based supercomputer Ulysses, able to provide Trieste scientists with over 35 million computer processing hours, began to work. And it is within the same MHPC framework that a meeting will be held (on the main premises of SISSA) from February 24 to 26 that will bring together some of the world's leading experts in supercomputing.

The conference will be attended by over 160 participants, with a large number of representatives from large and small industrial companies. Supercomputing is, in fact, becoming increasingly attractive to the world of industry. The official sponsor of the workshop is Eurotech, the Friuli Venezia Giulia-based "global" company that designs and builds leading-edge HPC systems.

The conference

The conference will be opened by Jack Dongarra, distinguished professor (an academic title given to scientists who have distinguished themselves for their outstanding scientific production) from the University of Tennessee, a leading expert in the field and co-editor of the TOP500 project, the twice-yearly ranking of the world's most powerful supercomputers. Among the other major figures participating in the workshop are Wolfgang Bangerth, from Texas A&M (USA) and author of the DEALII reference library for computational mathematics, and Nicola Marzari, professor at the Ecole Polytechnique Fédérale de Lausanne and visiting professor at the Boston MIT.

The workshop will comprise several sessions: the applications of supercomputing to physics of the earth and astronomy, materials science, mathematics and high energy physics. During each session, alongside the key figures and experts in the field, students on the MHPC and in particular those who completed the course in December 2015 will be given the opportunity to present their dissertations and projects in subjects ranging from earth sciences to high energy physics, to the optimization of satellite data and the development of parallel algorithms for data mining. The workshop aims to publicize the master's course internationally among potential future students, to expand the community that revolves around the MHPC and to increase awareness among the "computing" communities (especially in industry) that training in supercomputing is an absolute must today.

February 25 is also the day of the diploma awards ceremony for the 2014-2015 course (the first MHPC course), with the presentation of the prize for the best dissertation.

MHPC and supercomputing

The MHPC is organized by two world-renowned centres of excellence, the International School for Advanced Studies (SISSA) of Trieste and the International Centre for Theoretical Physics Abdus Salam (ICTP) of Trieste which guarantee its top-level quality and international standing. The teaching methods prioritize practical aspects, encouraging students to try their hand at real-world professional problems and activities. The excellence of the Master's course is confirmed by the teaching faculty, all experts from the academic world or from leading international companies such as INTEL, and by the major partnerships and sponsorships by research institutions and industrial companies interested in the training of new HPC professionals.

USEFUL LINKS:

- **Workshop website: http://indico.sissa.it/e/hpcts2016**
- **Complete workshop programme: https://goo.gl/zuU8sy**

IMAGES:

- **Credits: SISSA**

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