Introduction to High-Performance Computing, PDC Summer School

Type
Course

Host organisation
School of Computer Science and Communication (Royal Institute of Technology (KTH))
Lindstedtsvägen 3, KTH CSC, The School of Computer Science and Communication | 100 44 Stockholm
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You are invited to register for the class "Introduction to High-Performance Computing" being held at PDC on the KTH main campus.

Facility website: www.pdc.kth.se/education/summer-school
Interest in collaboration with industry: Yes

Invitation

You are invited to register for the class "Introduction to High-Performance Computing" being held at PDC on the KTH main campus. To register, and find out more about the class, visit the course Web page at www.pdc.kth.se/education/summer-school

Background

The PDC Summer School in High-Performance Computing is an annual offering to researchers to improve on their skills in scientific computing. The course is held for its fourteenth consecutive year at KTH, Stockholm, Sweden. During two intensive summer weeks at the KTH campus students will be able to learn and improve their skills in writing efficient programs for serial and parallel scientific applications.

The course carries 7.5 ECTS (European Credit Transfer and Accumulation System), where 1.5 ECTS credits are equivalent to one week's workload of 40 hours. The student receives these credits on successful completion of the post-course project. Participants are strongly encouraged to bring their own problems or programs for discussion and to possibly use as the basis of the post-course project. Participants are provided with access to PDC's [Lindgren] (Cray XE6) system, the fastest supercomputer in the Nordic region. Industrial participation is welcome. The number of seats for all participants is limited.

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Registration opens March 15 and closes June 1, 2011:
www.pdc.kth.se/resources/computers/lindgren

Dates from 15 August 2011 08:00 to 26 August 2011 18:00

Outline

A number of topics will be covered in overview lectures given by international experts and in-depth technical lectures followed by hands-on computer lab sessions. The course will consist of about 35 hours of lectures and 35 hours of computer lab sessions. Among the topics:

- Programming Environments at PDC
- Parallel Programming
- Modern Computer Architectures
- Parallel Algorithms
- Efficient Programming
- Case Studies

These topics will be covered both in lectures and labs by the following teachers:

- David Black-Schaffer (Uppsala University)
- Iris Christadler (LRZ - Leibniz-Rechenzentrum), Munich, Germany
- Björn Engquist (KTH and the University of Austin), Austin, Texas, United States
- Thomas Ericsson (Chalmers)
- Erik Hagersten (Uppsala University)
- Michael Hammill (PDC)
- Sverker Holmgren (Uppsala University and SNIC)
- Niclas Jansson (CSC - KTH School of Computer Science and Communication)
- Lennart Johnsson (PDC and University of Houston), Houston, Texas, United States
- Erwin Laure (PDC)
- Dag Lindbo (CSC - KTH School of Computer Science and Communication)
- Elisabet Molin (PDC)
- Jesper Oppelstrup (CSC - KTH School of Computer + Science and Communication
- Michael Schliephake (PDC) Computer Laboratories

Roughly half of the class time will be spent hands-on in the lab. The lecturers and the PDC staff will assist in the computer labs. Students who do not already have an account at PDC will receive one. These accounts will stay active after the course so students may work on the post-course project.

Keywords
course, computing, PDC, Parallelldatorcentrum, industryinterest

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Categories
Data analysis and storage, Courses

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