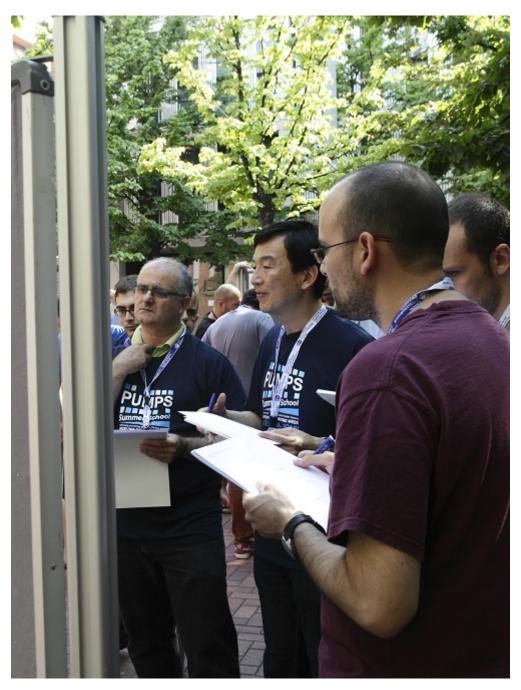


Published on BSC-CNS (https://www.bsc.es)

Inici > BSC holds the fifth edition of the PUMPS Summer School

BSC holds the fifth edition of the PUMPS Summer School

The PUMPS is aimed at enriching the skills of researchers, graduate students and teachers with cutting-edge technique and hands-on experience in developing applications for many-core processors.



The fifth edition of the Programming and Tuning Massively Parallel Systems summer school (PUMPS) is aimed at enriching the skills of researchers, graduate students and teachers with cutting-edge technique and hands-on experience in developing applications for many-core processors with massively parallel computing resources like GPU accelerators.

Summer School Co-Directors: **Mateo Valero** (BSC and UPC) and **Wen-mei Hwu** (University of Illinois at Urbana-Champaign)

Organized by:

Barcelona Supercomputing Center (BSC)

University of Illinois at Urbana-Champaign (University of Illinois)

Universitat Politecnica de Catalunya (UPC)

HiPEAC Network of Excellence (HiPEAC)

PUMPS is part of this year PRACE Advanced Training Centre program

Date: Monday, 7 July, 2014 - 09:00 to Friday, 11 July, 2014 - 18:00

Objectives:

- Instructors Wen-mei Hwu (University of Illinois) and David B. Kirk (NVIDIA), co-authors of "Programming Massively Parallel Processors, A Hands-on Approach", will provide students with knowledge and hands-on experience in developing applications software for many-core processors, such as general purpose graphics processing units (GPUs).
- By the end of the summer school, participants will:
 - Be able to design algorithms that are suitable for accelerators.
 - Understand the most important architectural performance considerations for developing parallel applications.
 - Be exposed to computational thinking skills for accelerating applications in science and engineering.
 - Engage computing accelerators on science and engineering breakthroughs.

Agenda:

• Topics:

The following is a list of some of the topics that will be covered during the course. The updated full program will soon be available

- CUDA Parallel Execution Model
- CUDA Performance Considerations
- o CUDA Algorithmic Optimization Strategies
- Data Locality Issues
- o Dealing with Sparse and Dynamic data
- o Efficiency in Large Data Traversal
- Reducing Output Interference
- o Debugging and Profiling CUDA Code
- o GMAC Runtime
- o Multi-GPU Execution
- Introduction to OmpSs
- o OmpSs: Leveraging GPU/CUDA Programming
- Hands-on Labs: CUDA Optimizations and OmpSs Programming

The programme is available here

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

Source URL (**retrieved on** *20 oct 2024 - 13:41*): https://www.bsc.es/ca/news/bsc-news/bsc-holds-the-fifth-edition-the-pumps-summer-school