BSC Training Course: Introduction to CUDA Programming

Objectives

The aim of this course is to provide students with knowledge and hands-on experience in developing applications software for processors with massively parallel computing resources. In general, we refer to a processor as massively parallel if it has the ability to complete more than 64 arithmetic operations per clock cycle. Many commercial offerings from NVIDIA, AMD, and Intel already offer such levels of concurrency. Effectively programming these processors will require in-depth knowledge about parallel programming principles, as well as the parallelism models, communication models, and resource limitations of these processors.

This course will also provide very good introduction to the PUMPS Summer School run jointly with NVIDIA (as this school has attendee selection process). Further information on the 2024 PUMPS Summer school will follow soon.

You may also be interested in our Introduction to OpenACC course.

Requirements

Basics of C programming and concepts of parallel processing will help, but are not critical to follow the lectures.

Speakers

Marc Jordà, Leonidas Kosmidis, Antonio J. Peña, Accelerators and Communications for High Performance Computing Group, Computer Sciences, BSC

Academic Staff
Course convener: Antonio Peña, Accelerators and Communications for High Performance Computing Group Manager, Computer Sciences, BSC
Lecturers: Marc Jordà, Leonidas Kosmidis, Antonio J. Peña, Accelerators and Communications for High Performance Computing Group, Computer Sciences, BSC

Materials

INTELLECTUAL PROPERTY RIGHTS NOTICE:

• The User may only download, make and retain a copy of the materials for his/her use for non-commercial and research purposes.

• The User may not commercially use the material, unless has been granted prior written consent by the Licensor to do so; and cannot remove, obscure or modify copyright notices, text acknowledging or other means of identification or disclaimers as they appear.

• For further details, please contact BSC?CNS patac@bsc.es

Further information

BSC Training Courses do not charge fees.
NOTE: PLEASE BRING YOUR OWN LAPTOP.

CONTACT US for further details about MSc, PhD, Post Doc studies, exchanges and collaboration in education and training with BSC.
For further details about Postgraduate Studies in UPC - Barcelona School of Informatics (FiB), visit the website.

Sponsor: BSC

Barcelona Supercomputing Center - Centro Nacional de Supercomputación