[HYBRID] PATC: Heterogeneous Programming on FPGAs with OmpSs@FPGA

Objectives

This tutorial will introduce the audience to the BSC tools for heterogenous programming on FPGA devices. It describes OmpSs@FPGA, as a productive programming environment for compute systems with FPGAs.

More specifically, the tutorial will:

- Introduce the OmpSs@FPGA programming model, how to write, compile and execute applications on FPGAs
- Show the "implements" feature to explot parallelism across cores and IP cores
- Demonstrate how to analyze applications to determine which portions can be executed on FPGAs, and use OmpSs@FPGA to parallelize/optimize them.

Requirements

- Good knowledge of C/C++
- Basic knowledge of acceleration architectures and offloading models
- Basic knowledge of Paraver/Extrae

Please download and carefully read the following **instructions** regarding the logistics participants enrolling PATC at BSC are expected to follow.

Learning Outcomes

The students who finish this course will be able to develop benchmarks and simple applications with the OmpSs@FPGA programming model to be executed in FPGA boards, like Zedboard or Xilinx ZCU102.

Academic Staff

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Convener: Xavier Martorell, CS/Programming Models

Lecturers:

BSC - Computer Sciences department

Daniel Jimenez-Gonzalez - Programming Models - Associate Researcher
Carlos Alvarez - Programming Models - Associate Researcher
Xavier Martorell - Programming Models - Parallel programming model - Group Manager

Materials

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• For further details, please contact BSC?CNS patc [at] bsc [dot] es

Further information

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All PATC Courses at BSC do not charge fees.
NOTE: PLEASE BRING YOUR OWN LAPTOP.

Recommended Accomodation: Please follow the link for map of some local hotels.

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.

Sponsors: BSC and PRACE 5IP project are funding the PATC @ BSC training events.
If you want to learn more about PRACE Project, visit the website.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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