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BSC Training Course: Advanced 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.

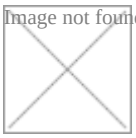
Requirements

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

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



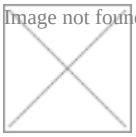
Convener: Xavier Martorell, CS/Programming Models

Lecturers:

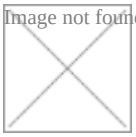
BSC - Computer Sciences department

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

Materials



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

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