

PATC Course: 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 exploit 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.

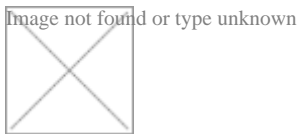
Requirements

- 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.

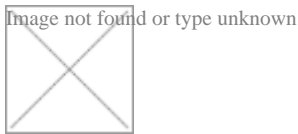
Academic Staff



Convener: Xavier Martorell, CS/Programming Models

Lecturers: Daniel Jiménez-González, Carlos Àlvarez, Antonio Filgueras, Miquel Vidal

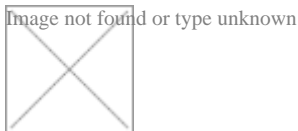
Materials



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Further information



All PATC Courses at BSC do not charge fees.

NOTE: PLEASE BRING YOUR OWN LAPTOP.

<http://montblanc-project.eu/>

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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