

PATC Course: Parallel Programming Workshop

Objectives

The course starts with the objective of setting up the basic foundations related with task decomposition and parallelization inhibitors, using a tool to analyze potential parallelism and dependences. The course follows with the objective of understanding the fundamental concepts supporting shared-memory and message-passing programming models. The course is taught using formal lectures and practical/programming sessions to reinforce the key concepts and set up the compilation/execution environment. The course covers the two widely used programming models: OpenMP for the shared-memory architectures and MPI for the distributed-memory counterparts. The use of OpenMP in conjunction with MPI to better exploit the shared-memory capabilities of current compute nodes in clustered architectures is also considered. Paraver will be used along the course as the tool to understand the behavior and performance of parallelized codes.

Requirements

Prerequisites: *Fortran, C or C++* programming. All examples in the course will be done in C.

NOTE:

Please follow the announcements on this page for the teaching program during the next training sessions.

You can now access the lecture notes under "Materials"

Recommended Accomodation:

Please follow [the link](#) for map of some local hotels.

Contact Us:

[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:

If you want to learn more about PRACE Project, visit the [website](#).

[Materials](#)

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[Parallel Programming Day 1](#)

[Parallel Programming Day 2](#)

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[Parallel Programming Day 5](#)

The solutions for the practicals will be available here shortly.

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