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# PATC Course: Programming Distributed Computing Platforms with COMPSs

## **Objectives**

The objectives of this course are COMPSs is a programming model which is able to exploit the inherent concurrency of sequential applications and execute them in a transparent manner to the application developer in distributed computing platform. This is achieved by annotating part of the codes as tasks, and building at execution a task-dependence graph based on the actual data used consumed/produced by the tasks. The COMPSs runtime is able to schedule the tasks in the computing nodes and take into account facts like data locality and the different nature of the computing nodes in case of heterogeneous platforms. Additionally, recently COMPSs has been enhanced with the possibility of coordinating Web Services as part of the applications. COMPSs supports Java, C/C++ and Python as programming languages.

**Learning Outcomes:** In the course, the COMPSs syntax, programming methodology and an overview of the runtime internals will be given. The attendees will get a first lesson about programming with COMPSs that will enable them to start programming with this framework.

A hands-on with simple introductory exercises will be also performed. The students who finish this course will be able to develop simple COMPSs applications and to run them both in a local resource and in a distributed platform (initially in a private cloud)

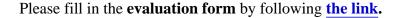
# Requirements

**Prerequisites:** Programming skills in Java and or Python

### Registration for this course is available here

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

**Comments:** 



#### **Recommended Accommodation:**

Please follow the link for map of some local hotels.

#### **Contact Us:**

<u>CONTACT US</u> 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 3IP project are funding the PATC @ BSC training events. If you want to learn more about PRACE Project, visit the website.

#### Materials



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

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