[ONLINE] PATC: Short course on HPC-based Computational Bio-Medicine

Objectives

The objetive of this course is to give a panorama on the use of hpc-based computational mechanics in Biomedical Sciences. The training is delivered in collaboration with the centers of excellence CompBioMed2 and PerMedCoE.

Requirements

Level: All courses are designed for MSc and PhD students in STEM or Medical sciences.

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

Learning Outcomes

The course gives a wide perspective and the latest trends of how HPC helps in biomedical applications allowing to achieve more realistic multiphysics simulations. In addition, the student has the opportunity of running Jobs in Marenostrum supercomputer.

Academic Staff

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Course convener:

Mariano Vázquez, Established researcher, BSC-CASE, Physical and Numerical Modelling Group

Lecturers:

Marco Verdicchio (SURF.NL) & Benjamin Czaja (SURF.NL) - "First steps in the HPC environment".

Alexander Heifetz (Evotec) - "Introduction to Computer-Aided Drug Design (CADD)"

Andrea Townsend-Nicholson (UCL) - "Molecular Medicine"

David Oks(BSC) & Cristobal Samaniego(BSC) - "Fluid-Structure Interaction methods for biomechanics"

Jelle van Dijk (UvA) - "Zoom in on blood - Using supercomputers for blood flow simulations"

Miroslav Kratochvil (BSC, PerMedCoE) - "A brief introduction to large-scale constraint based metabolic modeling and analysis"

Arnau Montagud (BSC, PerMedCoE) - "The use of multiscale modelling to build a virtual patient from the cell-level up"

Materials

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Further information

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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.

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.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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