



Contribution ID: 5

Type: **not specified**

Frameworks to Aid Code Development and Performance Portability

Tuesday 24 February 2015 16:00 (1 hour)

Introduces the need for development frameworks to exploit and manage the different levels of parallelism of heterogeneous platforms. Presents their programming paradigm, execution flow, and performance model. Integrates one framework (StarPU or DICE) with a simple case study, with a detailed discussion the required steps to automatically guarantee both the functionality and performance portability across different systems.

Targeted audience: This lecture is oriented for physicists and computer scientists developing compute intensive data-parallel applications.

Benefits of attending the lecture: To get acquainted with frameworks that aid the development of efficient code for heterogeneous platforms, which at runtime manage data transfers and automatically adapts the code to the available computing resources.

Prerequisites: This lecture targets physicists and computer scientists with experience in C++ application development on current computing platforms (laptops/desktops, computing clusters) and basic knowledge of the CUDA environment.

Presenter: PEREIRA, André (LIP-Minho/University of Minho)

Session Classification: Development of High Performance Computing Applications Across Heterogeneous Systems