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HPC and hardware heterogeneity, how to navigate in this environment?

Monday, 4 September 2023 09:00 (50 minutes)

Abstract: The need for large-scale models and simulations is more and more increasing, these last years. To provide support to process them, the High-Performance Computers are reaching Exascale capacities, most of them using accelerators. How to obtain better results with this increasing complexity of top computers? In this talk, I will discuss several topics related to performance improvements of applications, heterogeneous environments, and how to deal with their complexity.

To be noted: The school attendants will have the possibility to deepen their knowledge on this topic, thanks to the hands-on Lab prepared by Dr. Alfredo Goldmann (see INFIERI2023-Labs Booklett).

Lecturer: is a full time professor at São Paulo University, Institute of Mathematics and Statistics (IME). He finished his Ph.D. in France at Grenoble (November 99). Graduated with a BA in Applied Mathematics from the University of São Paulo (1990), MSc in Applied Mathematics from the University of São Paulo (1994) and Ph.D. in Informatique et Systèmes - Institut National De Polythecnique Grenoble (1999). He is currently associate professor at the University of São Paulo, associate editor of the journal Parallel Computing, part of the program committee of conferences like XP, IPDPS, IEEE NCA, ICPP, JSSPP, SBAC, SBRC, SBES and SBQS. He has experience in differents areas of Computer Science, mainly in the following topics: parallel and distributed computing, scheduling and agile software development (Text informed by the Lecturer).

Presenter: Prof. GOLDMAN, Alfredo (IME, USP, BR)

Session Classification: Big Data, Massive and High Performance Computing, Data transmission