



Taking on Exascale Challenges: Key Lessons & International Collaboration Opportunities

Birds-of-a-Feather Session at SC15

Jointly organised by ETP4HPC and European Exascale Projects

Date: Thursday, November 19

Time: 3:30-5:00pm

Location: Room 13A, Austin Convention Centre

Abstract

The established EU-funded Exascale projects and initiatives (CRESTA, DEEP/DEEP-ER, MontBlanc, NUMEXAS, EXA2CT, EPIGRAM and NESUS) will present their status, lessons learnt and potential cross-region synergies.

In addition, the long-term EU effort to develop, produce and exploit Exascale platforms continues with 19 projects within the first part of the Horizon 2020 programme addressing: HPC core technologies and architectures, programming methodologies, languages and tools, APIs and system software, new mathematical and algorithmic approaches.

A European status update will be presented with an emphasis on international collaboration opportunities and mechanisms needed to integrate different approaches, both in hardware and software.

Program

Introduction **Overview** on the European Exascale Landscape (both FP7 & H2020 initiatives)
By Jean-François Lavignon, ETP4HPC Chairman and Atos

Talks **Presentation of Focus Research Areas**

Area 1: Architecture & Compute

By Filippo Mantovani, Technical Project Coordinator Mont-Blanc, Barcelona Supercomputing Centre

Area 2: Interconnect, Memory & Storage and Data-intensive Real-Time

By Prof. Jesus Carretero, Computer Architecture Professor, Computer Science and Engineering Department, University Carlos III Madrid

Area 3: Programming Models, Algorithms & Mathematics

By Stefano Markidis, Assistant Professor, KTH Royal Institute of Technology

Panel Discussion - Featuring distinguished international guests:

Mitsuhisa Sato, Co-project leader of Post-K, University of Tsukuba and RIKEN AICS
Franck Capello, Senior Computer Scientist, Argonne National Laboratory
Eric Van Hensbergen, Senior Principal Research Engineer, ARM Research

Moderated by Sai Narasimhamurthy, Staff Engineer Research, Seagate