

## Heterogeneity Alliance, on the road

21<sup>st</sup> January 2019

Press room, Valencia Conference Center



The workshop objective is to present the vision and activities of the Heterogeneity Alliance promoted by several EU projects and organizations, coordinated by TANGO Project. The Alliance is aiming at joining forces around heterogeneity challenges. The workshop aims at attracting new members for the Alliance and to validate with HIPEAC community the initiative and the produced results so far. The workshop will go also deeply into the different and complementary approaches and assets to address the identified challenges.

### Workshop agenda:

- 10:00 Welcoming and introduction
- 10:05 **Invited Keynote** (Gita Koblenz, IBM), (45') (10' for questions)
- 11:00 **The heterogeneity alliance**
  - o **Goal and objectives, why to join, how** (10') (Clara Pezuela, ATOS)
  - o **Alliance activities: architecture, catalogue and book** (10') (Karim Djamame, University of Leeds)
  - o **Alliance challenges in HIPEAC vision** (10') (Olivier Trezo, ISBM)
- 11:30 **Theme 1 – Hardware acceleration of big data platforms**
  - o *Current and future approaches* (E2Data project, 20')
  - o *Acceleration of big data using FPGAs in the cloud* (Vineyard project, 20')
  - o *A complete HPC system efficiently utilizing FPGAs* (ECOSCALE project, 20')
  - o *Accelerating computer vision algorithms: a computing continuum perspective* (OPERA project, 20')
  - o Round of questions and comments with the audience (10')
- 13:00 **Lunch break**
- 14:00 **Theme 2 – Energy, security and real-time in heterogeneous platforms**
  - o *Code optimization and self-adaptation of applications in heterogeneous systems* (TANGO project, 20')
  - o *Memory scheduling in designing predictable systems* (Hercules project (20')
  - o *Digital Forensics Analysis for large numbers of IoT devices*, (SHARCS project, 20')
  - o Round of questions and comments with the audience (15')
- 15:15 **Coffee break and networking**
- 16:00 **Theme 3 - Heterogeneous programming models**
  - o *Automated code adaptation using mathematical descriptions.* (University of Ulm, 20')

- *Managed runtimes in heterogeneous JVMs* (University of Manchester, 20')
- *A task-based programming model for programming distributed heterogeneous computing platforms* (BSC, 20')
- Round of questions and comments with the audience (15')
- 17:15 **Closing** (Clara Pezuela, ATOS, 10')

**Alliance Web site:** <http://heterogeneityalliance.eu/>