

International Liaison



- **Leads :** *Mark Asch* (ANR-FR), *Marcin Ostasz* (BSC-ES), *Thierry Bidot* (Neovia-FR)
- **Objectives**
 - Mapping and analysis of national and international R&I programs/activities/research agendas in HPC towards exascale, and **convergence** of Exascale with Exabyte (big compute and big data).
 - Coordination with and participation in relevant international activities.
 - Establishing and maintaining a global network of expertise and funding bodies in the area of exascale computing.
 - Acting as a proactive European voice and representative in the International Exascale Software Community and the BDEC initiative.
- **Coordination** with
 - **ETP4HPC**
 - SPPEXA (Germany-France-Japan).
 - Belmont Forum CRA on e-infrastructures & data management (14 countries).
 - Coordinated Research on E-infrastructures (CRE) (DG-CNECT, RDA).
 - **BDEC** (EU-USA-Asia)

International Liaison: Outline

- State of the art on funding agencies
- Facilitate International Collaboration Opportunities
- EXDCI in Europe and world-wide

State of the art on funding agencies

- **Aim:** investigate and describe funding structures and strategies of public bodies worldwide with exascale computing projects or plans.
- **How?**
 - By establishing and maintaining a global network of expertise and funding bodies in the area of exascale computing.
 - By providing an overview of the funding efforts and R&D priorities of the different regions and in so doing give orientations and recommendations to global vision of WP4.

Collaborations between European projects and non-EU actions

- **Opportunities:**
 - Analysing the activities of the European projects (mainly the ones from the FET HPC call) and other HPC Ecosystems actions with an objective to identify the areas of:
 - (1) technology provision,
 - (2) infrastructure and
 - (3) application resources that can benefit from international collaboration.
- **Federating** the international contacts to prevent each project from having to develop its own network.
- Identifying **tools** suitable for fostering such relationships



Taking on Exascale Challenges: Key Lessons & International Collaboration Opportunities

Birds-of-a-Feather Session at SC15

Jointly organised by European Exascale Projects and ETP4HPC

Date: Thursday, November 19

Time: 3:30-5:00pm

Location: Room 13A, Austin Convention Centre

Abstract

The European HPC Technology eco-system has entered a stage of rapid development. This acceleration is due to the progress of the established EU-funded projects ((CRESTA, DEEP/DEEP-ER, Mont-Blanc, NUMEXAS, EXA2CT, EPiGRAM and NESUS) and also the 19 new 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.

Publication of a post-BOF report and related material
(<http://www.etp4hpc.eu/european-exascale-projects-2/>)



International collaboration: Activities

- Discussions initiated with Japanese partners – Fujitsu and Riken (meetings at ISC'15 and SC'15)
- A **document issued for Riken** on the European HPC Eco-system (we are expecting a similar document in return).
- **EXDCI Survey** in order to prepare upcoming BOF at SC'16 and the Handbook

International Actions

- **Aim:** develop relationships with other HPC Ecosystems
- **How?**
 - Approach those already recognized as significant players through established events.
 - Identify and work with emerging HPC Ecosystems in Central and South America (Mexico and Brazil), Africa (South Africa) and Australia.
 - Co-organization of International community workshops.
 - Participation in supercomputing conferences.

- **BDEC** (<http://www.exascale.org/bdec/>)
 - The series of workshops on **Big Data and Extreme-scale Computing (BDEC)** are premised on the idea that we must begin to systematically map out and account for the ways in which the major issues associated with **Big Data** intersect with, impinge upon, and potentially change the national (and international) plans that are now being laid for achieving **exascale computing**.
 - Three **closed** workshops have already been held since 2013, a 4th one will be held prior to ISC'16 – it will be followed by an **open workshop** on June 23rd in Frankfurt.

- Central theme of the closed 4th workshop (16-17 June) is **"Pathways to Convergence"**, based on:
 - 1. Common tools and technologies (libraries, I/O, visualization).
 - 2. Common scientific process (applications, workflows).
 - 4. Common ecosystem (mixes of data- and HPC-centres).
- Followed by an **open workshop** on June 23rd that will cover:
 - National and International roadmaps.
 - Reporting on the closed workshop.

Upcoming events:

- BDEC workshop in ISC'16 (Frankfurt) – June 23rd, 2016
- SC'16 in Salt Lake City – 13-18 November, 2016

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<https://exdci.eu/>