Wrap up of an inspiring EuroHPC Summit Week 2019

The EuroHPC Summit Week 2019 closed successfully and gathered the main HPC stakeholders from 13 May to 17 May 2019 in Poznań, Poland. The entire week was organised by PRACE, EXDCI-2 and ETP4HPC. PRACE's Polish Member, the Poznań Supercomputing and Networking Center (PSNC), hosted the EuroHPC Summit Week. More than 360 participants joined plenary sessions, parallel sessions, and discussions to tackle the important topics facing science, industry and the HPC landscape.

A packed plenary programme offered the attendees fascinating insights into scientific and industrial achievements. An update on the activities of the EuroHPC Joint Undertaking (JU) was presented by Thomas Skordas (Director of DG CONNECT, Directorate C "Digital Excellence and Science Infrastructure" of the European Commission, and Vice Chair of the EuroHPC Governing Board) during the Opening Plenary.

This was followed by Erik Huizer's (CEO of GÉANT) interesting presentation on "Why NRENs are essential for a successful EuroHPC?"

Sinéad Ryan (Trinity College Dublin) and Núria López (ICIQ; Chair of the PRACE Scientific Steering Committee) gave an insightful presentation about "The Scientific Case for Computing in Europe 2018-2026", drawing attention to the achievements of computational science across various research domains and recommending to invest in the European HPC infrastructure to bring further benefits to society.

Highlights of the conference were the scientific keynotes given by Marina Bécoulet (CEA) "Challenges of First Principle Modelling and Role of HPC in Magnetic Fusion" and Vadim Monteiller (CNRS) "In Memoriam – Dimitri Komatitsch", and the industrial keynote by Julien Harou (University of Manchester) "Water Resource Modelling" and Ange Caruso (EDF) "Modelling and simulation issues at EDF enabling energy challenges".

How to tackle the different needs of Big Data projects and the increasing demands of HPC were important topics during the plenary as well. The Big Data and Extreme-scale Computing (BDEC) provided a European and international view on this challenge on Wednesday morning. The two keynotes given by David Eyes (KAUST) and Rosa Badia (BSC) emphasised the challenges and expectations, and potential solutions for the "Digital continuum" on which rely the next generation platforms, tackling with heterogeneity of data and computing resources. The international BDEC consortium agreed during its meeting in Poznań on two demonstrators of such platforms, involving a panel of experts coming from both the major HPC regions in the world, but also the entire value chain: from machines to users, including participants from LHC, SKA and CNES.

EuroHPC was present in several conference sessions, with a very successful EuroHPC Birds-of-a-Feather (BoF) session to share information on the organisation and workings of EuroHPC with the HPC community at large. Several sessions were dedicated to specific EuroHPC issues, such as the EuroHPC Mini-Symposium – Co-Design Workshop. The goal of this mini-symposium was to ensure that new European technologies are fully exploited and meet the needs of users and applications addressing grand scientific and societal challenges.

The HPC Ecosystem Summit gave a good platform to stakeholders to discuss how to create a coherent HPC landscape including access to HPC resources, services for users and research. The summit helped to clarify the future roles of each actor in the field and was followed by an HPC Ecosystem Plenary and a number of HPC Ecosystem Workshops on Thursday afternoon, organised by EXDCI-2. Those workshops gave an overview of the European effort and results in HPC, with the presentation of the new Strategic Research Agenda from ETP4HPC, the analysis of the rich results of the EU FET HPC projects, and the upcoming works of EuroLab4HPC. The workshops also included sessions on future technologies and how they can be used in HPC, as well as on the future of legacy codes, which all triggered lively exchanges between attendees.

PRACE held the 6th edition of the PRACE Scientific and Industrial Conference (PRACEdays19) as part of the EuroHPC Summit Week 2019. PRACEdays19 included eight parallel scientific tracks and one industrial track in afternoon sessions from Tuesday to Wednesday. More than 30 presentations were given about r a wide range of scientific topics including Physics, Life Sciences, or Computation Science / Towards Exascale. The industrial session provided a good platform for the speakers to present their interesting results such as outcomes of the SHAPE (SME HPC Adoption Programme in Europe) programme and the necessity of collaboration between industry and science.
The PRACE User Forum Open Session provided a good insight into the needs of the users, underlined by the results of a survey carried out in spring 2019 among the principal investigators (PIs) of PRACE Tier-0 projects. Likewise the PRACE Peer Review process was presented by Maria Grazia Giuffreda. This session was live streamed and the recording can be viewed here:

- https://www.youtube.com/watch?v=WUUckLk0coo

PRACEdays19 also hosted a session dedicated to an open discussion on Equality and Diversity in HPC.

Thursday's plenary session gave the floor to the PRACEdays19 panel discussion. The topic was "*The future of scientific and industrial computing in Europe*", moderated by Guy Lonsdale of SCAPOS. There was a lively discussion highlighting various aspects that could be requested in the future by science and industry requirement for HPC. Please follow the link to see the recording of the discussion:

- https://www.youtube.com/watch?v=xCPR6B_ooNw .

Towards the end of the conference, Serge Bogaerts, PRACE Managing Director, was delighted to announce the following PRACE Award winners:

- **PRACE Ada Lovelace Award for HPC** to **Debora Sijacki** of the University of Cambridge. Debora could not receive her award personally, but she presented her research work in a video presentation: http://www.prace-ri.eu/shining-a-light-on-cosmic-darkness-winner-of-the-2019-prace-ada-lovelace-award-for-hpc/
- **PRACE Best Scientific Presentation Award** to **Michele Buzzicotti** of the University of Rome Tor Vergata, Italy for his presentation on "*Energy cascade in rotating turbulent flows*"
- **PRACE Best Industrial Presentation Award** to **Oriol Lehmkuhl** (https://www.bsc.es/lehmkuhl-oriol) of Barcelona Supercomputing Center (BSC) for his presentation on "*High fidelity simulation of vortex induced vibrations for flow control and energy harvesting*" which summarised the results of the VIVALdI project
- **PRACE Best Poster Award** to **Martin Golasowski** of IT4Innovation national supercomputing center and VŠB, "*Distributed environment for traffic simulations*"

For the second time, PRACE organised successfully the Hands-on Workshops for Students hosted by PSNC at their premises.

We would like to thank our Media Partners who have helped us to spread the word about the EuroHPC Summit Week 2019 by publishing interviews and articles before and after the event in their channels.

For the first time, the full EuroHPC Summit Week 2019 programme as well as practical information was made available to attendees in the Conference4Me app. This paperless solution allowed attendees to have easy and instant access to the up-to-date agenda and on-going sessions, and was much appreciated for its clear overview of the programme.

All information, abstracts, presentations, and other details about the EuroHPC Summit Week 2019 and its sessions can be found here: https://events.prace-ri.eu/event/850

About PRACE

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