

The ENES HPC-TF Newsletter

Issue n°3, September 2017

ENES, the "European Network for Earth-System modelling", established a Task Force, the so-called HPC-TF, in late 2011 to help addressing issues related simulation using high-performance computing and serving ENES active projects. The HPC-TF is presently serving the ESIWACE¹ Centre of Excellence. A newsletter is being produced on a regular basis, to bring in contained way information of likely interest to a larger community. It is also available at <https://verc.enes.org/computing/hpc-collaborations/hpc-taskforce>

1. European HPC strategy: ENES and ESIWACE have answered during August the questionnaire "Request for inputs to the implementation of Europe's High Performance Computing Strategy" sent by the European Commission (EC). These two, cross-referenced, replies underline the crucial role of HPC for weather and climate modelling, the strong willingness of the concerned communities to participate in the definition of the European HPC strategy, and their readiness to contribute through benchmarks, co-design ...

2. EPECC, European programme on extreme computing and climate: On July 6, 2017, an *ad hoc* meeting was organized in London to prepare the proposal "A Flagship European programme on extreme computing and climate" (EPECC).

EPECC is an ambitious pan-European project to implement a wholly new class of models for the analysis and prediction of weather and climate extremes, and their impacts, in a changing climate. Through a more fundamental and accurate representation of all components of the Earth system — made imaginable by the emergence of exascale computing — these models will greatly enhance our capacity to predict extremes, their underlying drivers, and eventual impacts.

EPECC is coordinated by ECMWF following an initiative of world leading weather and climate centers in Europe gathered within ENES. It is supported by the largest European high-performance computing and data handling facilities and it works in partnership with key European science and management consortia.

The topic 'Energy, environment and climate change' was selected by the EC following the submission of ideas for Flagships. The selection process starts with a so-called preparatory action, which allows 5-6 separate proposals to advance and define the blueprint for the respective Flagships. The call for proposals for the preparatory action will be issued in late October with a submission deadline in February. A writing team has been established for preparing the EPECC proposal, including sections on technology, science, business cases, downstream applications, and co-funding.

More information can be found at <https://ec.europa.eu/futurium/en/content/fet-flagships> and <https://ec.europa.eu/futurium/en/content/flagship-european-programme-extreme-computing-and-climate>.

3. 5th ENES HPC Workshop: ESIWACE will organize the 5th ENES HPC Workshop in Lecce (Italy) on May 17 and 18, 2018. The main focus of this workshop will be on high-resolution modelling, but it will also address other issues such as new paradigms and will involve discussions about the HPC ecosystem and relationships with vendors, the EC, EuroHPC, ... As for the 4 preceding workshops (Lecce, 2011; Toulouse, 2013; Hamburg, 2014; Toulouse, 2016) invited presentations will also be given by non-

¹ Centre of Excellence in Simulation of Weather and Climate in Europe (<https://www.esiwace.eu/>)

European specialists from US and Asia. A crowd close to 100 scientists, mostly European, involved in weather and climate modelling are usually attending these series of workshops. As the organization of the workshop progresses information will be found at <https://www.esiwace.eu/events/5th-enes-hpc-workshop>.

4. **ESiWACE General Assembly:** The ESiWACE General Assembly will take place in Berlin on December 12 and 13, 2017 (see <https://www.esiwace.eu/events>).

5. **Extreme-Scale Demonstrators (EsD):** ETP4HPC (the European Technology Platform For High-Performance Computing) has set up a process to facilitate networking among parties interested in participating in EsD projects. A number of entries have already been received, which include centers (BSC, ECMWF) and projects (ESCAPEZ, ESiWACE, NEXTGenIO) of direct relevance to weather and climate. More details can be found at <http://mailchi.mp/557cdd3656eb/etp4hpc-esd-networking-2017-deadline-is-end-of-aug-1124181?e=4ac3caae33>