

JSC to participate in four Horizon2020 Centres of Excellence

On May 8, the results of a keenly contested call for new "Centres of Excellence" within the EU Horizon2020 E-INFRASTRUCTURES Programme were announced [1]. These new funding instruments are intended to harness computational science and big data expertise in HPC in the promotion of scientific discovery and industrial competitiveness. Out of the 20 submitted proposals, 8 projects were approved for initial funding and 4 of these will include active JSC participation – see Table 1 and Ref. [2] for an overview. These four are: POP - Performance Optimisation and Productivity; MaX - Materials Design at the Exascale; E-CAM - an E-infrastructure for Software, Training and Consultancy in Simulation and Modelling; and EoCoE - an Energy-oriented Centre of Excellence. All projects – subject to final approval by all participants – plan to start in the autumn of this year.

EoCoE

EoCoE ("echo"), coordinated by the Maison de la Simulation at CEA, France, received the highest grade of the evaluation, and aims to exploit the prodigious potential offered by the maturing HPC infrastructure to foster and accelerate the European transition to a reliable, low-carbon energy supply. EoCoE will achieve its goal via targeted support of four distinct renewable energy pillars: Meteorology (Wind), Materials (Earth), Hydrology (Water) and Fusion (Fire), each of which boasts activities with a heavy reliance on numerical modelling. From the project outset these four pillars will be anchored within a strong

| Coordinator | Partners | Acronym | Proposed Title |
|-------------|----------|-----------|--|
| CEA | 13 | EoCoE | Energy oriented Centre of Excellence for computer applications |
| CNR | 12 | MaX | Materials design at the eXascale |
| UCD | 18 | E-CAM | An e-infrastructure for software, training and consultancy in simulation and modelling |
| BSC | 6 | POP | Performance Optimisation and Productivity |
| DKFZ | 16 | ESIWACE | Excellence in Simulation of Weather and Climate in Europe |
| POTSDAM | 10 | CDEGSS | Center of Excellence for Global Systems Science |
| KTH | 11 | BioExcell | Centre of Excellence for Biomolecular Research |
| MPG | 11 | NoMaD | The Novel Materials Discovery Laboratory |

Table 1: Summary of approved EU Centres of Excellence.

transversal multidisciplinary basis providing high-end expertise in applied mathematics and supercomputing science. EoCoE is structured around a central Franco-German hub coordinating a pan-European network, gathering a total of 8 countries and 23 teams, including 5 separate FZJ units from JSC, IEK and IBG. Its partners are strongly engaged in both the HPC and energy fields; a prerequisite for the long-term sustainability of EoCoE and also ensuring that it is deeply integrated in the overall European strategy for HPC.

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References

- [1] http://ec.europa.eu/research/participants/portal/doc/call/h2020/h2020-einfra-2015-1/1660102-h2020-einfra-2015-1_flash_call_info_en.pdf
- [2] <http://www.prace-ri.eu> (needs update)

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