

## DEISA Extreme Computing Initiative Attracts Record Number of Proposals

Europe's HPC infrastructure DEISA announced that the number of proposals received for the DEISA Extreme Computing Initiative (DECI) had jumped this year by 62% to a record 122 applications. Proposals submitted this year involve researchers from 30 countries - 22 in Europe and eight from the continents of America, Asia, and Australasia. More than half a billion compute-hours have been requested, an over-subscription by a factor of ten.

Researchers applying to DECI are hoping to be given access to Europe's most powerful supercomputers at one or more of the 13 DEISA partner sites which operate fifteen of the Top 100 supercomputers in the world. For the first time this year, national supercomputers in Switzerland and in Sweden will be available via DECI, in addition to the national supercomputers in Germany, UK, France, Italy, Spain, the Netherlands and Finland.

Through DECI, now in its sixth year of operation, scientists from 35 countries have tackled a wide range of scientific challenges in materials science, astronomical science, particle and plasma physics, earth sciences, biological sciences and engineering. Successful projects are chosen for their potential to achieve ground-breaking scientific results through the use of supercomputers, enabling them to run more detailed and accurate simulations of scientific problems than was previously possible. Staff from DEISA work closely with the researchers on each project, providing specialist applications support to optimise the scientific codes and deploy them on the most appropriate architecture.

Alison Kennedy, Coordinator of DECI said, "DEISA is delighted that the computational science community has demonstrated how much it values the important role which DECI plays in enabling collaborative European computational science. The response to the latest call has been overwhelming, in terms of both the quantity and quality of proposals received. We hope to support as many projects as possible."

Jukka Heikkinen from Finland is one of the scientists who has participated in several collaborative DECI projects. He said, "Realization of fusion energy for future requires today a vast amount of simulations of microscopic plasma turbulence at real size of the burning fuel. This is possible only with massively parallelized kinetic particle codes which can be only run in world's top supercomputers. DECI has made some of the best European supercomputers available to the fusion scientists developing the plasma turbulence codes. It has helped, in particular, in characterization of turbulence in several tokamak experiments and in understanding the plasma energy confinement transition at the tokamak plasma edge. In addition to providing flexibility and quickness in distributing the runs on several computers, speeding up thus the science making, the DECI scheme has enforced the harmonization of the user solutions for coding and library use. The latter has made the codes more independent of the computer architecture, helping thus the world-wide integration of the codes."

## **About DEISA:**

DEISA (Distributed European Infrastructure for Supercomputing Applications) is a consortium of leading national Supercomputing Centres in Europe to advance computational sciences in the area of supercomputing. The consortium has deployed and operates a complex and heterogeneous high performance computing infrastructure at a continental scale with an aggregated peak performance of about two PetaFlop/s. More than 180 European research institutes and universities have already benefited from the DEISA Extreme Computing Initiative, involving 25 European countries and four more continents. The DEISA Consortium is continuing its services through EU FP7 support for the DEISA2 project with the goal to provide a turnkey operational solution for a persistent European HPC service.

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