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DOE-funded Projects Launched at JSC

Recognizing the successful work that has recently been done at JSC in the areas of job monitoring and performance analysis, the US Department of Energy (DOE) Office of Science has recently launched two projects with the participation of JSC researchers, thus funding scientific personnel in Germany. The projects will contribute to the software environment needed to efficiently operate present and future large-scale systems.

The goal of the first project "A Scalable Development Environment for Petascale Computing" aims to reduce or eliminate some of the factors that hinder the productive development of scientific codes for parallel petascale systems. This will be addressed by enhancing the Eclipse Parallel Tools Platform (PTP). JSC's part in this project is to enhance the PTP capabilities with respect to batch system and application monitoring on petascale systems. This will allow a more detailed insight into the behaviour of the systems and applications of users. The development will start with the integration of the batch system monitoring tool LLview, developed at JSC, into PTP.

The PRIMA project pursues the goal of reengineering core components in TAU, a performance analysis system developed by the University of Oregon, and Scalasca for evolution to petascale and beyond. The impact of this work will be realized in the use of the performance tools in scientific codes both to test the efficacy of the chosen approach and to improve the performance at extreme scale. PRIMA is carried out in close cooperation with SILC, a project funded under the BMBF call "HPC-Software für skalierbare Parallelrechner", whose goal is the design and implementation of a scalable and easy-to-use performance measurement and monitoring infrastructure for supercomputing applications. (Contact: Wolfgang Frings, ext. 2435, Prof. Dr. Felix Wolf, ext. 1583)

Jülich-Chernogolovka Seminar

In spring 2009, computational scientists from the Science Centre in Chernogolovka, Russia, and the Jülich Supercomputing Centre at Forschungszentrum Jülich, Germany, agreed to set up a joint seminar in Computational Sciences. This seminar has been held monthly since September 2009 at the two distinct locations, linked together by AccessGrid, a modern video and collaboration tool, via the internet. A wide range of topics in statistical physics, plasma physics, hydrodynamics and atomistic systems has been presented from both parties in a 30+30 minute format and it is planned to involve other research groups working in computational science based in Jülich and Chernogolovka. During the seminar on 3 March, participants were treated to a surprise visit by the president of the Helmholtz Association, Prof. Mlynek, who interrupted his recent tour of Russian science laboratories to join the seminar. Further seminars will be announced at: *http://www.fz-juelich.de/jsc/events/jch-seminar*
(Contact: Dr. Paul Gibbon, ext. 1499)

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PRACE Scientific Steering Committee Workshop

PRACE (Partnership for Advanced Computing in Europe) will hold a workshop on 20 April 2010 at JSC to establish its Scientific Steering Committee (SSC). Participation is by invitation only.

One of the key elements of PRACE is that access to the Tier-0 HPC resources will be governed by a single European peer review process. SSC will give advice to PRACE concerning this peer review and all other matters of a scientific and technical nature. Its establishment is therefore an important step in creating the new Europe-wide HPC Research Infrastructure.

SSC will be an independent body composed of up to 21 high-profile scientists and its establishment is already being driven by the European science communities. Prof. Richard Kenway of the University of Edinburgh is head of the multinational Programme Committee organizing the workshop. Around 40 leading computational scientists from across Europe, spanning all the major HPC application areas, have been invited to assist PRACE by nominating members of SSC. The workshop will also provide an opportunity for participants to discuss their expectations concerning the governance of the PRACE peer review process.
(Contact: Dr. Florian Berberich, ext. 2547)

Enormous Demand for Computing Time

The recent call for applications for computing time on the supercomputers at Jülich has met with a tremendous response. About 170 project applications have been received, requesting about seven times the computing time available on the petaflop computer JUGENE as well as on the general purpose supercomputer JUROPA. The peer review board of the John von Neumann Institute for Computing (NIC) will decide in April on the distribution of the resources among the projects, based on a rigorous scientific evaluation.
(Contact: Dr. Walter Nadler, ext. 2324)

NIC Symposium 2010

The NIC symposium is held biennially to give an overview of activities and results obtained by research groups receiving computing time grants through the John von Neumann Institute for Computing (NIC). The fifth NIC Symposium took place at Forschungszentrum Jülich from 24 - 25 February 2010 and was attended by more than one hundred scientists working on the supercomputers at Jülich. They were welcomed by Prof. Schmidt (Board of Directors of Forschungszentrum Jülich), who gave an overview of research in Jülich, and by Prof. Lippert (JSC), who gave a presentation on new developments in supercomputing. In the scientific programme, recent results in various research fields such as astrophysics, biophysics, chemistry, elementary particle physics, condensed matter, materials science, soft matter science, environmental research, hydrodynamics and turbulence, plasma physics, and computer science were presented in 14 invited talks and more than 50 posters. Discussions at the talks and at the poster session were lively, providing participants with ample opportunity to exchange ideas and methods in an interdisciplinary setting.

The detailed programme and proceedings are available at: *http://www.fz-juelich.de/nic/symposium*.
(Contact: Dr. Walter Nadler, ext. 2324)

Master in Technomathematics Well Established

In January 2009, the first student on the master's course in technomathematics graduated from Aachen University of Applied Sciences (FH Aachen). This master's course has proved to be very successful since then. In the meantime, 18 students from Forschungszentrum Jülich have passed their exams and were awarded their master's degrees. The students worked on computational science and engineering projects at various institutes, reflecting the broad spectrum of technomathematics at Jülich, namely applied mathematics, modelling, simulation and computer science. Since 2007, this new course has been run jointly by FH Aachen and Forschungszentrum Jülich. Detailed information on topics of past master theses can be found at:
http://www.fz-juelich.de/jsc/tm/master
(Contact: Prof. Dr. Johannes Grotendorst, ext. 6585)

Events

Jülich Blue Gene/P Extreme Scaling Workshop
Date: 22 - 24 March 2010
Venue: Ausbildungsraum 3, JSC
Info: *http://www.fz-juelich.de/jsc/bg-ws10/*

Scientific Python
Speaker: Dr. Jack Liddle, JSC
Date: 22 - 24 March 2010, 9:00 - 16:30
Venue: Ausbildungsraum 2, JSC
Registration: *J.Liddle@fz-juelich.de*, ext. 1493

Workshop on NAG Toolbox for MATLAB
Speaker: Sorin Cristian Serban, NAG Ltd.
Date: Monday, 12 April 2010, 14:00 - 16:30
Venue: Besprechungsraum 1, JSC
Registration: *R.Zimmermann@fz-juelich.de*, ext. 4136

If you would like to receive regular information on our events, please send an e-mail to *jsc-events-join@fz-juelich.de*.

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