

## JSCNews

Jülich  
Supercomputing  
Centre

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### Tokamak Modellers in Jülich

The dedicated fusion supercomputer HPC-FF is formally managed under the European Fusion Development Agreement (EFDA). To mark the production start of HPC-FF, the 5th annual general meeting of the EFDA Task Force "Integrated Tokamak Modelling" (ITM) was held from 6 to 11 September 2009 in Jülich, jointly hosted by JSC and IEF-4 (Plasma Physics). The ITM Task Force has the long-term goal of supplying the EU fusion community with a suite of flexible and reliable physics codes necessary for preparing and analysing future ITER (International Thermonuclear Experimental Reactor) discharges.

The workshop was attended by 80 scientists from 20 EU member states and comprised a lively mixture of plenary sessions, parallel working groups and half-day tutorials. Contributions from JSC staff included a talk on the Jülich Benchmark Environment (JuBE); a tutorial on Grid and HPC access from KEPLER, the fusion code workflow tool, via UNICORE; and hands-on training for HPC-FF, which will play a key role in the ITM roadmap over the next two years.

Further information:

<http://itm2009.efda-itm.eu/>

(Contact: Dr. Paul Gibbon, ext. 1499)

### Forschungszentrum Jülich Joins eduroam

Forschungszentrum Jülich has joined eduroam (EDUcation ROAMing), a Pan-European wireless network service that al-

lows employees of its members to securely access the Internet while visiting other member organisations. With a special client software (the supplicant) installed on their laptop, employees of Forschungszentrum Jülich can now connect to the WLAN using their fz-juelich email username and password. There is no need to obtain a guest account at the organisation visited. In return, guests from other eduroam members can also access the Internet through the wireless network in Jülich with their home credentials.

More than 150 German universities, research labs and other organisations are participating in eduroam, and the European coverage can be found at <http://www.eduroam.org>. A common security policy and an end-to-end encryption ensure the privacy of the passwords and allow the identification of all users of the service, when needed. The security relies on the usage of the supplicant. Users should never enter their user id and password into a web login page. Installation and usage are documented in detail in TKI-0408 for various Windows, Windows Mobile and Linux systems, see <http://www.fz-juelich.de/jsc/files/docs/tki/tki-0408.pdf>.

(Contact: Markus Meier, ext. 6766)

### JSC at SC09 in Portland

SC09, the premier international conference on high-performance computing, networking, storage, and analysis, will take place in Portland, Oregon, from 14 to 20 November 2009.

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As in previous years, JSC will present its wide-ranging supercomputing activities there (booth #2255). One focus will be its new supercomputers, which are expected to attain a high ranking on the next Top500 and Green500 lists. JSC will also highlight its advanced support structure for scientific users, in particular its newly created simulation labs. In addition to talks and tutorial sessions at the conference, JSC staff will also give presentations at the booth about supercomputing tools and Grid activities developed in-house. JSC staff will also participate in the PRACE booth (#2973).

For up-to-date information on JSC's activities at SC09 see: <http://www.fz-juelich.de/jsc/news/sc09>

Do pay us a visit if you're attending the conference and also join in the PRACE treasure hunt!

(Contact: Dr. Walter Nadler, ext. 2324)

## VASP Support Modified

VASP is a package for performing ab initio quantum-mechanical molecular dynamics (MD) using pseudopotentials and a plane wave basis set. So far, JSC has provided executables of the VASP software version 4.6.35 on JUGENE, JUROPA and JUMP to users with a valid licence. However, due to the unconventional VASP licence policy and recurrent misunderstandings between licensees and the proprietor, JSC has modified its support for VASP. While assistance for code compilation and execution is still offered, JSC can no longer grant new users access to VASP executables nor update the VASP version already installed on the Jülich supercomputers. If users wish to employ the VASP code on these systems, they will have to obtain the source directly from the VASP developers. JSC will then provide assistance with the installation under the user account on the Jülich supercomputers and will help to run the code upon request.

(Contact: Dr. Florian Janetzko, ext. 1446)

## Obama Honours Blue Gene Technology

President Obama honoured IBM and its Blue Gene family of supercomputers with the National Medal of Technology and Innovation, the United States' most prestigious award given to leading innovators for technological achievements. He will personally present the award at a special White House ceremony on 7 October. IBM, which has already received the National Medal of Technology and Innovation on seven other occasions, is the only company recognized this year.

Blue Gene's speed and expandability have enabled business and science to address a wide range of complex problems and make more informed decisions in the life sciences, astronomy, climate, simulations, modelling and many other areas. The system also reflects breakthroughs in energy efficiency. With the creation of Blue Gene, IBM dramatically

reduced the physical size and energy needs of a computing system whose processing speed would have required a dedicated power plant capable of generating power for thousands of homes.

The influence of the Blue Gene supercomputer's energy-efficient design and computing model can be seen today across the information technology industry. JSC was one of the pioneers who with JUBL installed a Blue Gene system in Europe as early as 2005. Since then, the technology has advanced and Jülich now houses the 72-rack JUGENE, the largest Blue Gene system worldwide.

(Contact: Dr. Sabine Höfler-Thierfeldt, ext. 6765)

## Overwhelming Interest on Open Day

JSC was overwhelmed by the public's interest in the institute on Open Day in September. Hundreds of visitors crowded our foyer to see the supercomputers and to watch the presentations on simulation sciences. About 800 visitors followed the 15 presentations on 3D visualisation of scientific simulations. SuperResi, software simulating the workflow of a supercomputer, attracted in particular young visitors, who tried their hand at parallel computing feeding SuperResi with jobs. JSC staff members involved in education informed the public about opportunities for training as a mathematical technical software developer (MATSE) and about courses in Scientific Programming and Technomathematics at Aachen University of Applied Sciences. They presented the robots from the robotics course, which even attracted the attention of Minister Pinkwart. We would like to thank all our visitors for coming!

(Contact: Dr. Sabine Höfler-Thierfeldt, ext. 6765)

## Events

### Jülich Blue Gene/P Extreme Scaling Workshop

Date: 26 - 28 October 2009

Venue: Ausbildungsraum 3, Jülich Supercomputing Centre

Info: <http://www.fz-juelich.de/jsc/bg-ws09>

### Introduction to the programming and usage of the supercomputer resources in Jülich

Speakers: Representatives of IBM, Intel and ParTec, JSC staff members

Date: 26 - 27 November 2009, beginning on 26 Nov., 13:00

Venue: Hörsaal, Jülich Supercomputing Centre

Registration: [H.Frank@fz-juelich.de](mailto:H.Frank@fz-juelich.de), ext. 3893

### Einführung in die parallele Programmierung mit MPI und OpenMP

Speaker: Dr. Rolf Rabenseifner, HLRS Stuttgart

Date: 30 November - 2 December 2009, 8:30 - 18:00

Venue: Ausbildungsraum 1, Jülich Supercomputing Centre  
Registration: [http://java2.hlrs.de/ParProgWS\\_Registration/](http://java2.hlrs.de/ParProgWS_Registration/), the course in Jülich is "Course H".

**Editor: Dr. Sabine Höfler-Thierfeldt, ext. 6765**