

## JSCNews

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Centre

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### "JSC News" via E-mail

Starting with this issue, "JSC News" will also be available as a newsletter sent by e-mail. Anybody who wants to receive the e-mail version is invited to subscribe to a mailing list by sending an e-mail without content to [jscnews-subscribe@fz-juelich.de](mailto:jscnews-subscribe@fz-juelich.de) and confirming the registration afterwards. JSC will continue to send out printed copies, unless you notify us otherwise (e-mail to [jsc@fz-juelich.de](mailto:jsc@fz-juelich.de)). Furthermore, JSC News will still be available online at <http://www.fz-juelich.de/ias/jsc/jscnews> along with the new e-mail version and PDF files.

(Contact: Dr. Sabine Höfler-Thierfeldt, [s.hoeffler-thierfeldt@fz-juelich.de](mailto:s.hoeffler-thierfeldt@fz-juelich.de))

### JUQUEEN Extreme Scaling Workshop 2017

JUQUEEN Extreme Scaling Workshops provide selected application teams the opportunity to scale their codes up to 1.8 million hardware threads via exclusive access to the entire Blue Gene/Q at JSC, with expert hardware, software, and support personnel available to assist with running codes at this extreme scale.

Following the positive feedback from the 2015 and 2016 workshops, where seven code teams qualified for membership of the High-Q Club, we are planning to host another three-day workshop from 23 to 25 January 2017 with sufficient time set aside for performance analysis of large-scale executions and quantification of scaling inefficiencies.

Participation will be limited to a small number of application teams with codes that demonstrate good scaling potential, and where at least one team member will be present on-site for the workshop.

While we are particularly keen to support new application teams and codes, teams from previous extreme scaling workshops and High-Q Club members with application codes that have already demonstrated excellent scalability are not excluded if algorithmic – or other – changes are being investigated or the focus is on improved file I/O, etc.

Participation is by invitation only, so please contact us with the details of your code, its current scalability on Blue Gene/Q, and the expected benefits from this opportunity to demonstrate extreme scalability (e-mail to Brian Wylie, [b.wylie@fz-juelich.de](mailto:b.wylie@fz-juelich.de), or Dirk Brömmel, [d.broemmel@fz-juelich.de](mailto:d.broemmel@fz-juelich.de)). We will follow-up to refine proposals and confirm availability, with selection continuing until all available places are filled. You should therefore contact us as soon as possible if you are interested.

Please note that there is a special queue on JUQUEEN for jobs with more than 16 racks, which are run following maintenance or on a weekly basis as required, as well as regular Big Blue Gene Weeks dedicated to running large-scale jobs. The Extreme Scaling Workshop is a complementary support offer, which can serve as valuable preparation for the effective utilization of JUQUEEN and future large-scale computer systems.

(Contact: Dr. Brian Wylie, [b.wylie@fz-juelich.de](mailto:b.wylie@fz-juelich.de))

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## Big Blue Gene Week Reloaded

Due to the positive response to the first Big Blue Gene Week this summer, JSC will provide this opportunity to its users on a regular basis in future. The next event will take place from **1 to 8 December 2016** and will make the full capacity of JUQUEEN available to single runs of codes which profit from a high level of parallelism. During this week, job scheduling will again be modified as such that only jobs with a minimum of four Blue Gene/Q racks, or 65,536 compute cores, will be allowed to run. Smaller jobs will be excluded from execution. This will allow for better scheduling and a quicker turnaround of jobs requiring four to 28 racks.

All JUQUEEN users are invited to review their code and workflow in light of this event. If you have any questions, we encourage you to contact the supercomputing support team at [sc@fz-juelich.de](mailto:sc@fz-juelich.de).

(Contact: Dr. Daniel Rohe, [d.rohe@fz-juelich.de](mailto:d.rohe@fz-juelich.de))

## New GCS Large-Scale Projects in November

Twice a year, the Gauss Centre for Supercomputing (GCS) issues a call for large-scale projects on its petascale supercomputers – currently Hazel Hen (HLRS), JUQUEEN (JSC), and SuperMUC (LRZ). Projects are classified as large-scale if they require at least 35 million compute core hours. During its October meeting at JSC, the GCS Peer Review Board decided to award the status of a large-scale project to 18 projects from various fields of the simulation sciences. One project was granted 84 million compute core hours on Hazel Hen, eleven projects were granted about 650 million compute core hours on JUQUEEN, and six projects were granted about 330 million compute core hours on SuperMUC. In total, more than one billion compute core hours have been awarded for GCS large-scale projects. For more details on these projects, some of which utilize the resources of several centres, visit <http://www.gauss-centre.eu/large-scale>.

(Contact: Dr. Florian Janetzko, [nic@fz-juelich.de](mailto:nic@fz-juelich.de))

## PRACE 14th Project Access Call

Under the new framework of the PRACE 2 programme, PRACE opened its Call 14 for access to Tier-0 supercomputer systems. In total, PRACE can offer more than 2000 million compute core hours, which is three times more than in previous calls, and now offers a cumulated peak performance of more than 50 petaflops. The PRACE systems available are Curie (GENCI@CEA, France), Hazel Hen (GCS@HLRS, Germany), JUQUEEN (GCS@JSC, Germany), Marconi (CINECA, Italy), MareNostrum (BSC, Spain), SuperMUC (GCS@LRZ, Germany), and for the first time Piz Daint (CSCS, Switzerland).

Scientists and researchers are eligible to apply for access to PRACE resources, and industrial users can apply if they have their head offices or substantial R&D activity based in Europe.

The PRACE Access Committee, composed of leading European scientists and engineers, ranks the project proposals to be awarded access to PRACE resources. Further details on the application procedure can be found on the PRACE website, see <http://www.prace-ri.eu/prace-project-access/>.

The application deadline is 21 November 2016, 10:00 CET. The starting date for awarded proposals is 1 April 2017 with an allocation of 12 months.

## End of Year Colloquium 2016

Date: Tuesday, 13 December 2016, 09:30-16:00

Venue: Jülich Supercomputing Centre, Hörsaal

Talks with a German title will be given in German.

Info: <http://www.fz-juelich.de/ias/jsc/events/eoy-2016>

- 09:30 Thomas Lippert: Welcome
- 09:45 Bastian Tweddell, Wouter Klijn: HBP Pilot Systems – Introduction and first Use-Case Experiences
- 11:00 Guido Trenschi, Dimitri Plotnikov: Neuromorphic Systems – Running NESTML neuron models on SpiNNaker
- 11:40 Dieter Moser: PFASST – vom groben und feinen Feigen durch die Zeitebenen
- 12:10 Marc Fehling: Fein oder nicht fein – Adaptive Gitterverfeinerung in Brandsimulationen
- 14:00 Andreas Lintermann, Sebastian Lührs: Darf's ein bisschen mehr sein? Das JSC bietet Industriekunden mehr als Rechenzeit. – Einblick in die Startaktivitäten des Industry Relations Teams
- 14:30 Bernd Mohr: Das POP Centre of Excellence – Über die Schwierigkeit einen kostenlosen Service zu "verkaufen"
- 15:00 Gabriele Cavallaro: Scientific Big Data Analytics on the Background of Remote Sensing
- 15:30 Thomas Lippert:  
Wenn noch mehr Zahlen und Figuren  
Sind Schlüssel aller Kreaturen

## Events

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

Instructors: Representatives of Intel and ParTec, JSC staff members

Date: 24-25 November 2016, starting 24 November at 13:00

Venue: Jülich Supercomputing Centre, Hörsaal

Info: <http://www.fz-juelich.de/ias/jsc/events/sc-nov>

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