News

Official Inauguration of the Supercomputer JUQUEEN at JSC

On February 14, 2013, the new supercomputer JUQUEEN at the Jülich Supercomputing Centre was officially inaugurated in the presence of representatives from the German Federal Ministry of Education and Research (BMBF) and the Ministry of Innovation, Science and Research of the state of North Rhine-Westphalia (MIWF). After the last four of 28 computer racks had been installed in January, JSC was proud to present JUQUEEN in its final configuration to the public. Prof. Achim Bachem, chairman of the Board of Directors of Forschungszentrum Jülich, welcomed the guests and thanked the ministries for their financial support provided through the Gauss Centre for Supercomputing (GCS).

Prof. Wolf-Dieter Lukas (Fig. 1), head of their Directorate 5 at BMBF, delivered the official greeting on behalf of the Federal Minister. He outlined that the political decision to support supercomputing to the high amount as it had been done for the GCS supercomputers was a good one. However, the supercomputer is not the most important part, but the science that can be done with it. In this spirit, he congratulated Forschungszentrum Jülich for being part of the European FET Flagship "Human Brain Project", which will definitely add its share to the scientific simulations runnning on JUQUEEN. Helmut Dockter, State Secretary at MIWF, addressed JSC in the name of the NRW minister. He expressed his expectation to obtain simulation results relevant to the needs of society in order to facilitate future financial support.

The last speaker in the ceremony was Prof. Thomas Lippert, head of the Jülich Supercomputing Centre. He presented a short history of the rapid development in supercomputing, introduced which scientific problems of high complexity can be tackled with JUQUEEN, and gave an outlook on special simulations suitable to be run on this supercomputer. Afterwards, the guests were invited to visit JUQUEEN in the machine room (Fig. 2) and to celebrate the computer in a reception.

In the afternoon, the event continued with a scientific colloquium "Supercomputing in North Rhine-Westphalia". Four renowned top scientists from the fields of brain research, materials science, fluid dynamics and civil security research presented their simulations. Prof. Katrin Amunts from the C. and O. Vogt-Institute of Brain Research in Düsseldorf gave an overview on how to build a 3-D model of the human brain by using supercomputers. Prof. Heinz Pitsch, Institute for Combustion Technology at the RWTH Aachen University, introduced his research and simulations on turbulent reacting flows in engineering devices, such as aircraft engines and industrial combustors. In his talk "High-Performance Computing in Materials Science: Current Applications and Challenges", Prof. Alexander Hartmaier from the Interdisciplinary Centre for Advanced Materials Simulation (ICAMS), Ruhr-University Bochum, highlighted his development of methods and algorithms to upscale atomistic models. His goal is to unravel the complex interplay and competition of different fundamental mechanisms occurring during the deformation of materials.

In the final talk, Prof. Armin Seyfried from the Department of Computer Simulation for Fire Safety and Pedestrian Traffic at University of Wuppertal presented a decision support system for the evacuation of sport arenas and explained why the multi-scale character of fire simulations demands for large computing resources.

• Sabine Höfler-Thierfeldt

Jülich Supercomputing Centre

Figure 1: Prof. Wolf-Dieter Lukas from the German Federal Ministry of Education and Research gave the official greeting from the minister

Figure 2: Visiting JUQUEEN: Prof. Thomas Lippert (head of JSC), Prof. Achim Bachem (Chairman of the Board of Directors of Forschungszentrum Jülich), Prof. Wolf-Dieter Lukas (German Federal Ministry of Education and Research), Prof. Ernst Schmachtenberg (Rector of RWTH Aachen University), Helmut Dockter (Ministry of Innovation, Science and Research of North Rhine-Westphalia), and Prof. Sebastian Schmidt (member of the Board of Directors of Forschungszentrum Jülich)