

50 Years Jülich Supercomputing Centre

At the end of 2011, the Jülich Supercomputing Centre (JSC) looked back to its roots: although JSC first became known by this name in 2007, its predecessor has a long history which goes back to 1961. In autumn 1961, the Central Institute for Applied Mathematics (ZAM) was founded at Forschungszentrum Jülich (then known as Kernforschungsanlage) as a combination of a mathematical institute and a computing centre. After ten years of fruitful investigations in applied and numerical mathematics and scientific computing, a politically motivated drastic shortage of research funding slowed down the prosperity of the institute for a couple of years in the early seventies.

It was due to the personal commitment of Prof. Friedel Hoßfeld, director of ZAM from 1973 to 2002, that the institute recovered and regained its scientific position under his leadership. In the early

eighties, the institute entered the field of supercomputing with the installation of a Cray supercomputer, which at that time was the fastest supercomputer in Europe. In 1987, Friedel Hoßfeld's continuous engagement led to the foundation of the first German national supercomputing centre (Hochleistungs-rechenzentrum HLRZ) together with DESY and GMD, with ZAM being the main computer centre in this alliance. Supercomputing, data communication, cooperative computing and mathematics were the main topics of research at ZAM in the nineties. The Cray supercomputer complex installed in 1996 was another milestone in ZAM's history: for the first time, a supercomputer at Forschungszentrum Jülich was among the top 10 in the TOP500 list of the fastest supercomputers worldwide.

After Prof. Thomas Lippert became director of ZAM in 2004, he expanded

the institute to a leading supercomputing centre not only in Germany but also in Europe. In an increasingly competitive research landscape, funds could be secured to continue to procure and install leadership-class supercomputers: first JUMP in 2004, and JUGENE and JUROPA/HPC-FF in 2009. The latter computer was the first computer to be co-designed by JSC and realized by a multinational collaboration of several companies. Furthermore, several unique strategic partnerships with leading international companies like IBM and Intel have been set up to investigate hardware and software topics necessary for exascale supercomputers. In 2010, JSC became the first computing centre to deliver computing time to the European PRACE community.

To celebrate JSC's 50th birthday, a colloquium was held at Forschungszentrum Jülich on November 24, 2011. Congratulatory greetings were given by Prof. Achim Bachem (chairman of the Board of Directors of Forschungszentrum Jülich) and Prof. Kurt Binder (chairman of the Scientific Council of the John

von Neumann Institute for Computing). Three keynote talks covered the long period from the past to the future of supercomputing: Prof. Friedel Hoßfeld gave a witty overview of the institute's history. The present situation of JSC was demonstrated by its director Prof. Thomas Lippert, whereas Prof. Thomas Schulthess, director of the Swiss National Supercomputing Centre, presented his views on the future of supercomputing in his talk "High-end simulations: a driver or consumer of information technology?". 230 participants attended the celebration and the reception afterwards, making new acquaintances or renewing old ones with former JSC staff members.

JSC has many plans for the future. Simulation labs on diverse topics offer a new high-end support structure for scientific communities. New projects and collaborations lie ahead that will tackle the problems of future computer architectures.

• Sabine Höfler-Thierfeldt

Jülich Supercomputing Centre



Figure 1: Prof. Lippert thanks Prof. Hoßfeld for his presentation



Figure 2: Colloquium on the occasion of the 50th birthday of JSC