

8th meeting of the "IT" working group within DJW
Garching, 16.07.2015

Summary

Only two weeks after the inauguration of the second phase of SuperMUC - one of Europe's fastest super computers - the DJW IT working group had the privilege to do an exclusive guided tour through the Leibniz supercomputing centre (LRZ) in Garching near Munich. Dr. Volker Weinberg and his colleagues gave an introduction to the history of mathematics and computers followed by a 2-hour tour of the high performance and supercomputing facilities.

A special highlight was the visit to the Virtual Reality and Visualisation Centre (V2C). Here the powerwall for displaying and manipulating 3D images and a 5-sided projection installation (CAVE) were demonstrated. The immersive experience allowed the participants to explore various scientific data sets, like a virtual reconstruction of an ancient tomb or an exploratory flight over the alps, in 3D. Using a 3D pointing device one could even navigate through a museum simulation and explore precious artifacts there.

The tour continued to the neighboring 35m high double-cube building, which houses various high-performance Linux clusters, data storage systems and the SuperMUC itself. After its recent upgrade it can now perform a theoretical peak performance of 6.8 Petaflops (6.8 quadrillion floating point operations per second).

Applications reach from quantum physics, bioinformatics, astrophysics and geophysics to aerospace and automotive engineering. The group was even allowed to take a look behind the scenes and walk through the huge and complex installations for electric power supply, cooling and fire extinction which were very impressive. Due to the hot summer weather the tour was concluded with informal discussions at a nearby beer garden.

Many thanks to Dr. Weinberg and his colleagues for this fantastic tour.