Contribution ID: **5** Type: **Talk**

SIMOPEK –Project Update

Tuesday, 15 December 2015 11:15 (30 minutes)

The steady rise in energy consumption by data centers world wide over the last decade and the future 20MW exascale-challenge in High Performance Computing (HPC) makes saving energy an important consideration for HPC data centers. A move from air-cooled HPC systems to indirect or direct water-cooled systems allowed for the use of chiller-less cold or hot water cooling. However, controlling such systems needs special attention in order to arrive at an optimal compromise of low energy consumption and robust operating conditions. This talk highlights first results from the SIMOPEK project which is developing new concept along with software tools for modeling the data center cooling circuits, collecting data, and simulating and analyzing operating conditions. A first model for the chiller-less cooling loop of the Leibniz Supercomputing Center (LRZ) will be presented and lessons learned will be discussed, demonstrating the possibilities offered by the new concept and tools.

Primary author: WILDE, Torsten (Leibniz Supercomputing Centre)

Presenter: WILDE, Torsten (Leibniz Supercomputing Centre)

Track Classification: BMBF 3. HPC-Call