Contribution ID: **11** Type: **not specified**

Energy-Aware Scheduling at the Leibniz Supercomputing Centre

Thursday, 25 February 2016 14:30 (25 minutes)

Due to rising energy prices and increasing carbon footprint, it is commonly accepted that the main constraint for future, sustainable many-Peta to Exascale HPC system will be dictated by power consumption. Along with the design of more energy-efficient hardware and cooling infrastructures, a viable way of addressing this challenge is offered by energy-aware scheduling. This presentation explains the approach adopted by the Leibniz Supercomputing Centre to reduce power consumption by employing energy aware management software and thorough power consumption monitoring. Specifically, we will describe the energy aware scheduling feature of IBM LoadLeveler, the resource and management system adopted in SuperMUC, one of the faster supercomputers in the world. This feature allows to select the most "energy-efficient" CPU frequency for a large fraction of SuperMUC's application portfolio and, therefore, contributes to substantially reducing the overall energy consumption of the system.

Presenter: TAFANI, Daniele (Leibniz Supercomputing Center)