

## SORS: Extreme Scaling on SuperMUC

**Speaker: Dieter Kranzmueller, Ludwig-Maximilians-University Munich, Germany**



**Abstract:**

The HPC System SuperMUC at the Leibniz Supercomputing Centre (LRZ) in Garching near Munich is one of the most powerful computing systems of the world. Its performance of up to 3 Petaflop/s is provided by more than 155,000 cores, using a complex structure of thin and fat islands and an Infiniband interconnect. While the x86-compatible cores allow portability with smaller systems, the full performance is only achievable with scalable algorithms. At the same time, power consumption and energy restrictions apply. All this requires novel approaches in programming and dedicated training and support of the users. An example is the recent extreme scaling workshop taking place at LRZ, where users were rovkod to use as many cores

as possible for their applications. The observations and results from the workshop provide an interesting insight into the state-of-the-art of scalable applications today and some of these results and interesting findings will be presented during the talk.

**Short Bio:**

Dieter Kranzlmüller is full professor of computer science at the Ludwig-Maximilians-University (LMU) Munich and member of the board of the Leibniz Supercomputing Centre (LRZ) of the Bavarian Academy of Sciences and Humanities. He has worked in parallel computing and computer graphics since 1993, with a special focus on parallel programming and debugging, cluster and especially grid computing. He has participated in several national and international research projects, has been acting as reviewer and international expert for several countries and research programs, and has co-authored more than 150 scientific papers in journals, and conference proceedings. At present, he serves as Strategic Director for EGI\_DS, the European Grid Initiative Design Study and as Area Director Applications of the Open Grid Forum (OGF). Before his recent move to Munich, he has been deputy head of GUP, the Institute of Graphics and Parallel Processing at the Johannes Kepler University Linz, Project Director of EGI\_DS, appointed national representative of Austria in the EU e-Infrastructures Reflection Group (eIRG), and member of the Austrian Grid Executive Board.

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