

Invitation to lecture series „Simulation Sciences“

Wednesday, October 1st 2014, Room 0.101, Institute for Computer Science, University of Göttingen, 3:30 pm

Prof. Dr. Ulrich Rüde
Department of Computer Science 10 (System Simulation),
Friedrich-Alexander University Erlangen-Nürnberg

will talk about

Towards Exascale Simulation Technology

Content of the lecture:

Exploiting heterogeneous and hierarchically structured extreme scale computer systems to their full capability requires innovation on many levels: New algorithmic paradigms must address unprecedented levels of concurrency and must support asynchronous execution. A new performance-oriented software design technology must be developed to support efficiency, scalability, portability, and flexibility. I will report on our recent work in the waLBerla and HHG frameworks for simulating complex particulate flows based on the lattice Boltzmann method (LBM) and for solving Finite Element Systems using Multigrid Methods. Scalability and performance results for up to a trillion degrees of freedom as well as experiments on accelerator based systems will be presented.

Guests are welcome.

The lecture will be held in this building:

Room 0.101
Institute für Computer Science, University of Göttingen
Goldschmidtstrasse 7
37077 Göttingen

