数学与系统科学研究院

计算数学所学术报告

报告人：Prof. Ulrich Ruede

（ FAU Erlangen-Nuremberg, Germany ）

报告题目：

Massively Parallel Algorithms and Methods for Multiphysics Simulations

邀请人： 周爱辉 研究员

报告时间：2015 年 8 月 6 日（周四）

上午 10:00- 11:00

报告地点： 数学院南楼七层

702 会议室

Abstract:

Exploiting future extreme scale computers to their full capability requires innovation on many levels. New algorithmic paradigms must address an unprecedented scale of concurrency and must support asynchronous execution. A new performance-oriented software design technology must be developed to support efficiency, scalability, portability, and flexibility. The talk will present recent work on simulating complex flows based on the lattice Boltzmann method (LBM) and on using parallel multigrid methods. A special focus will be on coupled problems as they arise in geophysics and in the direct numerical simulation of suspensions, where the fluid-structure-interaction between the hydrodynamics and large ensembles of geometrically resolved particles must be be modelled and simulated. Validation, scalability and performance results will be presented.

欢迎大家参加！