数学与系统科学研究院

计算数学所学术报告

报告人：Prof. Gabriel Wittum

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报告题目：

Modelling and Numerical Simulation of Complex Processes

邀请人： 张晨松 副研究员

报告时间：2015 年 8 月 4 日（周二）

下午 14:00~15:00

报告地点： 科技综合楼三层

311 报告厅

Abstract:

Numerical simulation with supercomputers has become one of the major topics in Computational Science. To promote modelling and simulation of complex problems, new strategies are needed allowing for the solution of large, complex model systems. Crucial issues for such strategies are reliability, efficiency, robustness, scalability, usability, and versatility.

After discussing the needs of large-scale simulation we point out basic simulation strategies such as adaptivity, parallelism and multigrid solvers. These strategies are combined in the novel simulation system UG 4 ("Unstructured Grids") being presented in the following.

In the second part of the talk we show the application of these strategies to the simulation of processes from biosciences and environmental sciences. In particular we will show simulation of permeation through human skin and computations of density-driven groundwater flow.

欢迎大家参加！