数学与系统科学研究院

计算数学所学术报告

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报告题目:

From Peta–Scale to Exa–Scale
Computing with Multilevel Methods邀请人:周爰辉研究员退告时间:2010 年 5 月 7 日(周五)下午 2:00—5:00下午 2:00—5:00退告地点:科技综合楼三层 311计算数学所报告厅

<u>Abstract :</u>

In this talk, I will introduce the issues

arising in peta-scale computing on the fastest computers that exist today. Additionally, I will address the problems that we will have to solve during the coming decade in our attempt to reach exa-scale computing. After reviewing technological trends and the architecture of current petascale systems, the talk will turn to programming techniques that are necessary to exploit such architectures. Using multilevel iterative finite element solvers as an example, we will discuss performance optimization techniques for current and future supercomputers. I will introduce a number of practical examples taken from real time control of industrial processes and medical image processing. The talk will end with an outlook towards using hardware accelerators for multigrid methods that are are used as fast solvers for finite element discretizations. 欢迎大家参加!