数学与系统科学研究院

计算数学所学术报告

报告人： **Prof. Zhiqiang Cai**

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报告题目：**Efficient, Reliable, and Robust A Posteriori Error Estimators of the Recovery Type**

邀请人： 周爱辉研究员

报告时间： **2010** 年 **7** 月 **9** 日（周五）

下午 **4**：**00**～**5**：**00**

报告地点： 科技综合楼三层 **311**

计算数学所报告厅

Abstract：

Adaptive mesh refinement (AMR) algorithms are one of necessary tools for grand challenging problems in scientific comptuing. Efficient a posteriori error estimation is the key for success of AMR algorithms. Since Babuska's pioneering work in 1976, the a posteriori error estimation has been extensively studied. Impressive progress has been made during the past three decades. In this talk, I will first describe basic principles of existing error estimators for finite element approximations to elliptic partial differential equations. I will then introduce our recently developed a posteriori error estimators of recovery type. These efficient, reliable, and accurate estimators can be applied to nonlinear problems and problems of practical interests such as interface singularities, discontinuities in the form of shock-like fronts and of interior or boundary layers, and oscillations.

欢迎大家参加！