数学与系统科学研究院

计算数学所定期学术报告

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报告题目：

A convergent adaptive finite element algorithm for nonlocal diffusion models

报告时间：2012 年 4 月 26 日（周四）

下午 **16**：**00~17**：**00**

（**15**：**30~16**：**00** 茶歇）

报告地点：　科技综合楼三层 **311**

计算数学所报告厅

Abstract：

Nonlocal models have attracted much attention recently, which has many applications in materials, image processing and so on. This talk will focus on nonlocal diffusion models and corresponding numerical methods. An adaptive finite element algorithm will be presented for the numerical solution of a class of nonlocal models which correspond to nonlocal diffusion equations with certain non-integrable kernel functions. The a posteiroiri error estimator is established, and the convergence of the adaptive finite element algorithm is rigorously derived with the help of several basic properties. This work also considers how the results are affected by the horizon parameter δ which characterizes the range of nonlocality. Numerical experiments are performed to verify the theoretical findings.

欢迎大家参加！