

数学与系统科学研究院

计算数学所学术报告

(博士后定期学术报告)

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报告题目:

带间断系数椭圆问题的 mortar-型旋转 Q_1 元的区域分解方法

报告时间: 2009 年 10 月 14 日(周三)

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:

In this talk, we discuss several domain decomposition preconditioners for the mortar-type rotated Q_1 finite element method for second order elliptic partial differential equations with piecewise but discontinuous coefficients.

Our analysis is valid for rectangular or L-shaped domains, which are partitioned by rectangular subdomains and meshes. We have shown that our proposed methods are quasi-optimal, i.e., the condition number of the preconditioned systems are $O((1+\log(H/h))^k)$, $k=2, 3$, which is independent of the jump in the coefficient. Numerical experiments are presented to confirm our theoretical analysis.

欢迎大家参加！