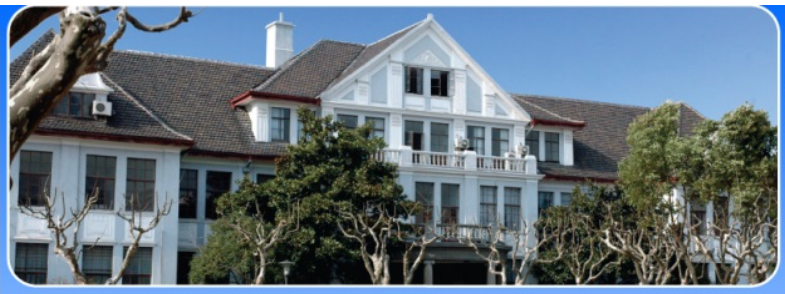


复旦大学数学科学学院
数学综合报告会

报告题目：**Local Multigrid with Applications**

报告人：Xuejun Xu（Tongji University and LSEC, Institute of Computational Mathematics）

报告时间：2016-01-08 星期五 15:15-16:15

报告地点：光华东主楼 1403

摘要： In this talk, we shall present some local multigrid algorithms for solving the linear algebraic systems arising from the adaptive continuous and discontinuous finite element methods. The abstract Schwarz theory is applied to analyze the multigrid methods withJacobi or Gauss-Seidel smoother performed on local nodes on each level. It is shown that the local multigrid methods are optimal,which means that the convergence rates are independent of the mesh sizes and mesh levels. Furthermore, we shall explore the local multigrid methods for solving convection-diffusion equation and time-harmonic Maxwell equation.

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