

数学与系统科学研究院

计算数学所博士后定期学术报告

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报告题目:

**Multigrid methods for the jump  
coefficients and adaptive problems**

报告时间: **2015 年 11 月 11 日 (周三)**

**下午 16:00-17:00**

报告地点: **科技综合楼三层**

**311 报告厅**

## **Abstract:**

**We investigate multigrid methods for the jump coefficients and adaptive problems. We construct and analyze multigrid methods from the viewpoint of space decomposition and subspace correction.**

**For the elliptic problems with jumps in coefficients, we construct a modified multigrid method. For both successive subspace correction methods and parallel subspace correction methods, we prove the uniform convergence of our modified multigrid method.**

**We also study the multigrid methods on adaptive refined finite element meshes. We introduce a new local projection and prove the uniform convergence of the multilevel algorithm which performs relaxation on new nodes and their immediate neighbors. By this techniques, we can study the jump coefficients problems on the adaptive meshes.**

**欢迎大家参加！**