

数学与系统科学研究院

计算数学所学术报告

报告人: Dr. Long Chen

(University of California, Irvine)

报告题目:

Multigrid Methods on Adaptive Grids

邀请人: 陈志明研究员

报告时间: 2009年6月9日(周二)

上午 10:00—11:00

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 shall design and analyze additive and multiplicative

multilevel methods on adapted grids obtained by newest vertex bisection in two and three dimensions. The analysis relies on a novel decomposition of newest vertex bisections which gives a bridge to transfer results on multilevel methods from uniform grids to adaptive grids. Based on this space decomposition, we will present a unified approach to the multilevel methods for H^1 , $H(\text{curl})$, and $H(\text{div})$ systems. We shall also present efficient coarsening algorithms based on the decomposition of bisection grids and use them to implement Geometry–Algebraic Multigrids. This talk is based on the joint work with R. Nochetto and J. Xu.

欢迎大家参加！