

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:

**Computation of High Frequency
Waves in Unbounded
Domain: Perfectly Matched Layer
and Source Transfer**

报告时间: 2013 年 10 月 24 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:

The talk considers numerical techniques for solving high frequency Helmholtz equations in unbounded domain. We first introduce several key ideas which played important role in solving the Helmholtz problem in unbounded domain including the radiation condition, absorbing boundary condition, and perfectly matched layer. The focus will be a recently introduced source transfer domain decomposition method (STDDM) whose optimal complexity is proved in the case of constant wave number based on the convergence theory of PML method. Our numerical experiments show that STDDM can be used as an efficient preconditioner for Helmholtz equations with heterogeneous wave numbers.

欢迎大家参加!