

数学与系统科学研究院

计算数学所学术报告

报告人: 王 坤

(重庆大学)

报告题目:

**Efficient and Accurate Difference
Schemes for the Helmholtz Equation
with High Wave Numbers**

邀请人: 黄记祖 博士

报告时间: 2016 年 7 月 12 日 (周二)

下午 15:30-16:30

报告地点: 科技综合楼三层

311 报告厅

Abstract:

In this talk, we introduce new finite difference schemes for solving the Helmholtz equation with high wave numbers. The most important result presented in this study is that the developed difference schemes are pollution free, and their convergence orders are independent of the wave number k in some special domains. Let h denote the step size, it will be demonstrated that when solving the Helmholtz equation at large wave numbers and considering kh is fixed, the errors of the proposed new schemes decrease as h decreases even when k is increasing and $kh > 1$.

欢迎大家参加！