数学与系统科学研究院

计算数学所学术报告

报告人：　**Dr. Jianfei Huang**

（ *University of Iowa, USA* ）

报告题目：

Two Numerical Schemes for Time-Space Fractional Diffusion Equations Based on Spatial Spectral Method

邀请人：　唐贻发 研究员

报告时间：**2016** 年 **7** 月 **27** 日（周三）

上午 **11:30-12:30**

报告地点：　数学院南楼七层

702 会议室

Abstract:

In this talk, we will discuss two numerical schemes for time-space fractional diffusion equations based on spectral Galerkin method for spatial direction. After spatial spectral discretization, two different temporal discretizations are given. Firstly the fractional trapezoid formula is applied to deal with temporal direction based on the equivalence between Volterra integral equations and fractional ordinary differential equations with initial conditions. Secondly the Runge-Kutta methods are used in time for the deduced small-scale linear system of Volterra integral equations obtained from spatial discretization. The corresponding theoretical analysis of these two discretizations are discussed, and some numerical experiments are carried out to verify the effectiveness of our methods.

欢迎大家参加！