

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Jian Deng**

(*Department of Mathematical and Statistical Sciences, University of Alberta,
Canada*)

报告题目:

**Pathwise Stochastic Modified
Equations and Backward Error
Analysis**

邀请人: 曹礼群 研究员

报告时间: **2014 年 6 月 17 日 (周二)**

上午 10:30-11:30

报告地点: 科技综合楼三层 **311**

计算数学所报告厅

Abstract:

Backward error analysis, as the core part of the geometric numerical integration theory, is an important tool to study the long time behavior of numerical integrator. The main idea of it is to use a perturbed equation, called modified equation, to interpret the numerical solution from integrator. But the stochastic backward error analysis has not been well developed so far, since the construction of stochastic modified equation is still a challenge problem in numerical analysis. In the presentation, the modified equation with respect to pathwise (strong) convergence is built up for explicit stochastic Euler method. Moreover, we can show the one step pathwise 'error' of stochastic modified equation is sub-exponentially small with respect to time step.

欢迎大家参加!