

数学与系统科学研究院

计算数学所学术报告

报告人: Prof. George Em Karniadakis

(*The Charles Pitts Robinson and John Palmer Barstow Professor of
Applied Mathematics, Brown University*)

报告题目:

**High-accuracy numerical methods
for solutions of fractional PDEs with
singularities in space/time**

邀请人: 唐贻发 研究员

报告时间: 2016 年 12 月 16 日 (周五)

下午 16:00-17:00

报告地点: 数学院南楼七层

713 教室

Abstract:

In this talk I will present recent work using spectral Petrov-Galerkin methods and spectral collocation methods to resolve solutions with singularities arising in solutions of fractional boundary value problems. We show that we can obtain exponential convergence even for singular solutions as long as the right-hand-side is smooth. We then deal with time singularities that affect the solution at early times and develop a correction method that leads to second-order accuracy in time.

欢迎大家参加！