数学与系统科学研究院

计算数学所系列学术报告

报告人：　Prof. Weiqing Ren

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报告题目：

Modelling rare events in complex systems: theory and numerical methods

邀请人：　明平兵 研究员

报告时间及地点：

2018 年 5 月 29 日（周二）上午 8:30-11:30 南楼 202 教室

2018 年 5 月 30 日（周三）下午 14:00-17:00 南楼 902 教室

2018 年 5 月 31 日（周四）上午 8:30-11:30 南楼 902 教室

2018 年 6 月 1 日（周五）上午 8:30-11:30 南楼 902 教室

Abstract:

The dynamics of complex systems is often driven by rare but important events. Well-known examples include nucleation events during phase transition, conformational changes of bio-molecules, dislocation dynamics in crystalline solides, etc. The long time scale associated with these rare events is a consequence of the disparity between the effective thermal energy and typical energy barrier of the systems. The dynamics proceeds by long waiting periods around metastable states followed by sudden jumps from one state to another. In this series of lectures, I will discuss theories and numerical methods for modelling such rare events. Topics include: Transition state theory, milestoning, the transition path theory, minimum action method, the string method, and applications.

欢迎大家参加！