

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Weiqing Ren**

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报告题目:

**Modeling Rare Events in Complex
Systems: Numerical Methods and
Applications**

邀请人: 明平兵 研究员

报告时间: 2017 年 5 月 9 日 (周二)

上午 10:00-11:00

报告地点: 数学院南楼九层

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 solids, 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 talk, I will discuss numerical methods for the study of such rare events, and present some applications including transitions in Kuroshio, the wetting transition on patterned solid surface, and conformational changes of bio-molecules.

欢迎大家参加！