

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Jingrun Chen**

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报告题目:

**Current-driven magnetization
dynamics: Modeling and numerics**

邀请人: 明平兵 研究员

报告时间: 2016年8月29日(周一)

上午 10:00~11:00

报告地点: 数学院南楼七层

702 会议室

Abstract:

Understanding magnetization dynamics in magnetic materials under external current control plays a vital role in magnetic storage devices, such as magnetoresistance random access memories and race-track memories. In this talk, we will discuss how to model such a phenomenon at different spatial and temporal scales. Consequently, a series of models is obtained with increasing accuracy. Efficient numerical methods are also proposed and applied to a couple of prototypical devices, which produces consistent results with experiments. Of physical and technological interests, 1D surrogate model is also derived using the method of matched asymptotics, which explains the Walker's breakdown. The gap between the 1D model and the original model will also be discussed.

欢迎大家参加！