

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Shibin Dai**

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报告题目:

**Coarsening Dynamics for the
Cahn-Hilliard Equation with
Phase-dependent Diffusion Mobility**

邀请人: 陈志明 研究员

报告时间: 2016 年 6 月 27 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:

The Cahn-Hilliard equation is a widely used phenomenological diffuse-interface model for the simulations of phase separation and microstructure evolution in binary systems. We consider a popular form of the equation with a smooth double-well potential, and with phase-dependent diffusion mobilities. The latter is a feature of many materials systems and makes both theoretical analysis and accurate numerical simulations challenging. In this talk, we discuss three aspects of the equation:

1. theoretical predictions on the coarsening dynamics based on asymptotic analysis;
2. numerical simulations that confirm the theoretical predictions;
3. the existence of weak solutions that potentially accommodate the features predicted by asymptotic analysis and exhibited in numerical simulations.

欢迎大家参加！