

数学与系统科学研究院  
计算数学所网络学术报告

报告人: **Prof. Ping Lin**

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报告题目:

**A thermodynamically consistent  
phase-field model for moving contact  
line problems and its application in  
vesicle motions**

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报告时间: 2021 年 9 月 15 日 (周三)

下午 14:30-15:30

报告工具: ZOOM 会议 (ID: 8653 0942 059)

密码: 873009

## **Abstract:**

**We will first show how to develop a thermodynamically consistent phase field model for the binary incompressible (quasi-incompressible) fluid with thermocapillary effects, which allows for the different properties (densities, viscosities and heat conductivities) of each fluid component. We then derive a phase-field model for variable density moving contact line problems and apply the idea to model vesicle motions and deformations through a narrowed channel. Energy law preserving computational methods are developed for variable density models. A few illustrative computational examples will be presented.**

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