

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Xiaoming He**

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报告题目:

**Immersed finite element methods for
parabolic equations with moving
interface**

邀请人: 毛士鹏 副研究员

报告时间: **2018 年 12 月 25 日(周二)**

上午 10:00-11:00

报告地点: **科技综合楼三层**

311 报告厅

Abstract:

Three Crank-Nicolson-type immersed finite element (IFE) methods are presented for solving parabolic equations whose diffusion coefficient is discontinuous across a time dependent interface. Instead of the body-fitting mesh needed by the traditional finite elements for solving interface problems, these IFE methods can use a structured mesh because IFEs can handle interface jump conditions without requiring the mesh to be aligned with the interface. Several disadvantages of the body-fitting mesh for time-dependent interface problems will be discussed. And then a fixed structured mesh for IFEs will be utilized to resolve these problems. Numerical examples are provided to demonstrate features of the three IFE methods.

欢迎大家参加！