数学与系统科学研究院

计算数学所学术报告

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报告题目：

Some techniques to decouple the computations of phase field model of complex fluids

邀请人： 邸亚娜 副研究员

报告时间：2015 年 7 月 8 日（周三）

下午 15:30~16:30

报告地点： 科技综合楼三层

311 报告厅

Abstract：

We consider the numerical approximations of phase-field models for two-phase complex fluids. We first reformulate the phase-field models derived from an energetic variational formulation into a form which is suitable for numerical approximation and establish their energy laws. Then, we construct two classes, stabilized and convex-splitting, of decoupled time discretization schemes for the coupled nonlinear systems. These schemes are unconditionally energy stable and lead to decoupled, elliptic equations to solve at each time step. Furthermore, these elliptic equations are linear for the stabilized version. Stability analysis and ample numerical simulations are presented.
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