数学与系统科学研究院

计算数学所学术报告

报告人： **Prof. Chang-Ock Lee**

（ *Department of Mathematical Sciences*，*KAIST*，*Daejeon Korea* ）

报告题目：

A finite element approach for the dual Rudin-Osher-Fatemi model and its nonoverlapping domain decomposition methods

邀请人： 张硕 副研究员

报告时间：2019 年 8 月 8 日（周四）下午 15:00

报告地点： 科技综合楼三层 311 报告厅**

Abstract：

We consider a finite element discretization for the dual Rudin-Osher-Fatemi model using a Raviart-Thomas basis for H0(div; Omega). Since the proposed discretization has a splitting property for the energy functional, which is not satisfied for existing finite difference-based discretizations, it is more adequate for designing domain decomposition methods. In this talk, a primal domain decomposition method is proposed which resembles the classical Schur complement method for the second order elliptic problems, and it achieves $O(1/n^2)$ convergence. A primal-dual domain decomposition method based on the method of Lagrange multipliers on the subdomain interfaces is also considered. Local problems of the proposed primal-dual domain decomposition method can be solved at a linear convergence rate. Numerical results for the proposed methods are provided.

欢迎大家参加！