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：

A Robust Iterative Method for a Class of New Mixed Discretization of Elasticity

邀请人： 张晨松 副研究员

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上午 **14:40~15:20**

报告地点： 科技综合楼三层

301 报告厅

Abstract：

In this talk, we will first present a family of new mixed finite element methods for linear elasticity. The methods can be efficiently implemented by hybridization. In order words, by introducing the Lagrange multiplier to impose inter-element continuity for stress, the solution of the original indefinite system can be locally recovered by the Lagrange multiplier, which is the solution of a symmetric semi-positive-definite (SSPD) system. We then develop an overlapping Schwarz method to the SSPD system and prove its uniform convergence with respect to both the mesh size and Poisson ratio. The new discretization together with the robust solver provides a new competitive approach for stress analysis in computational structure mechanics. Numerical tests are presented to validate the theoretical results.

欢迎大家参加！