

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 finite element method for
elastic vibration problems**

邀请人: 毛士鹏 副研究员

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上午 10:00-11:00

报告地点: **科技综合楼三层**

311 报告厅

Abstract:

A robust finite element method is introduced for solving elastic vibration problems in two dimensions. The discretization in time is based on the P_1 -continuous discontinuous Galerkin (CDG) method, while the spatial discretization on the Crouziex-Raviart (CR) element. It is proved that the error of the displacement (resp. velocity) in the energy norm (resp. L^2 norm) is bounded by $O(h+k)$ (resp. $O(h^2+k)$), where h and k denote the mesh sizes of the subdivisions in space and time, respectively. Under some regularity assumptions on the exact solution, the error bound is independent of the Lam $\{e\}$ coefficients of the elastic material under discussion. Several numerical results are reported to illustrate numerical performance of the proposed method. This is a joint work with Yuling Guo from Shanghai Jiao Tong University.

欢迎大家参加！