

数学与系统科学研究院  
计算数学所定期学术报告

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报告题目:

**Further study of C-R type  
nonconforming FEMs**

邀请人: 许学军 研究员

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**下午 16: 00~17: 00**

**(15: 30~16: 00 茶歇)**

报告地点: **科技综合楼三层 311**

**计算数学所报告厅**

## **Abstract:**

In this report, we will show the further studies of Galerkin FEMs and Mixed FEMs with famous nonconforming Crouzeix-Raviart type linear triangular element,  $EQ_1^{rot}$  and modified  $Q_1^{rot}$  quadrilateral elements to some practical problems on regular (or anisotropic ) meshes, e.g., the second order elliptic problem, the second order inequality problem with displacement obstacle, Signorini problem, Stokes problem (or with damping), Navier-Stokes problem, Magnetohydrodynamics (MHD) problem, the plate bending problem and so on. The relations of some mesh conditions are also discussed, and the corresponding optimal error estimates and superconvergence results are obtained. Numerical results are presented to confirm the validity of the theoretical analysis.

欢迎大家参加!