

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:

**Finite Element Approximations of  
Nonlinear Eigenvalue Problems in  
Density Functional Models**

报告时间: **2011 年 1 月 6 日 (周四)**

**下午 16: 00~17: 00**

**(15: 30~16: 00 Tea Time)**

报告地点: **科技综合楼三层 311**

**计算数学所报告厅**

## **Abstract:**

**In this presentation, we will talk about finite element approximations of nonlinear eigenvalue problems resulting from modeling micro-structures of matter based on density functional theory. We will present a priori and a posteriori error estimates of finite element approximations. In particular, we will show the convergence and complexity of adaptive finite element approximations and report some numerical results of finite element electronic structure calculations that support our theory. This presentation is mainly based on some joint works with Huajie Chen, Xingao Gong, and Lianhua He.**

**欢迎大家参加!**