

**数学与系统科学研究院**

**计算数学所学术报告**

**报告人: Prof. Eric Cances**

**(Ecole des Ponts Paris Tech, France)**

**报告题目:**

**Nonlinear eigenvalue problems and  
applications to electronic structure  
calculations**

**邀请人: 周爱辉研究员**

**报告时间: 2009年9月11日(周五)**

**下午 4:00—5:00**

**报告地点: 科技综合楼三层 301**

**计算数学所报告厅**

## **Abstract:**

**The first part of my talk will be devoted to the numerical analysis of nonlinear elliptic eigenvalue problems of the form  $-\Delta u + V u + u^3 = \lambda u$ . Globally convergent numerical algorithms for finding the ground state will be presented, and a priori error estimates will be derived for both Fourier (planewave) and finite element discretizations. The second part of my talk will be concerned with the extension to these results to the case of TFW and Kohn–Sham models. This is a joint work with R. Chakir and Y. Maday (University Paris 6).**

**欢迎大家参加！**