

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Xiaobing Feng**

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报告题目:

**Absolutely stable DG and LDG  
methods for high frequency wave  
equations**

邀请人: 许学军研究员

报告时间: **2011 年 7 月 11 日 (周一)**

**下午 16: 00-17: 00**

报告地点: **科技综合楼三层 301**

**计算数学所小报告厅**

## **Abstract:**

**In this talk I shall discuss some recent progresses in developing absolutely stable interior penalty discontinuous Galerkin (IPDG) methods and local discontinuous Galerkin (LDG) methods for high frequency Helmholtz equation and time-harmonic Maxwell equations. The focus of the talk is to present the ideas and rationales how these non-standard (h- and hp-) IPDG and LDG methods are constructed and why they do a better job than other existing numerical methods such as finite element and finite difference methods. Stability and convergence analyses and the non-standard techniques for proving them will be discussed in detail, and numerical experiments will also be presented to show the efficiency of these IPDG and LDG methods.**

**欢迎大家参加!**