数学与系统科学研究院

计算数学所学术报告

报告人： **Prof. Di Liu**

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报告题目：

Multi-scale modeling and computation of nano optical responses

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报告时间：**2013 年 5 月 17 日（周五）下午 16:00-17:00**

报告地点： 科技综合楼三层 **311** 计算数学所报告厅

Abstract：

We introduce a new framework for the multi-physical modeling and multi-scale computation of nano-optical responses. The semi-classical theory treats the evolution of the electromagnetic field and the motion of the charged particles self-consistently by coupling Maxwell equations with Quantum Mechanics. To overcome the numerical challenge of solving high dimensional many body Schrodinger equations involved, we adopt the Time Dependent Current Density Functional Theory (TD-CDFT). In the regime of linear responses, this leads to a linear system of equations determining the electromagnetic field as well as the current and electron densities simultaneously. A self-consistent multi-scale method is proposed to deal with the well separated space scales. Numerical examples arepresented to illustrate the resonant condition.

欢迎大家参加！