

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Tony W. H. Sheu**

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报告题目:

**Evanescent wave coupling between  
two parallel silica nanowires**

邀请人: 戴小英 副研究员

报告时间: **2016年6月28日(周二)**

**上午 10:00-11:00**

报告地点: 数学院南楼六层

**602 会议室**

## **Abstract:**

**In this study the efficiency of evanescent coupling between two air-clad silica nanowires in single-mode operation is numerically predicted in time domain using the finite difference method. To this end, a three dimensional scheme for solving the Maxwell's equations is developed in staggered grids. The electric and magnetic field solutions will be sought subject to the discrete zero-divergence condition (or Gauss's law). In addition, it is aimed to conserve Hamiltonians existing in ideal Maxwell's equations all the time by applying the explicit second-order accurate symplectic partitioned Runge-Kutta temporal scheme. Moreover, all the spatial derivative terms in the Faraday's and Ampere's equations are approximated by a scheme which can reader not only a fourth-order spatial accuracy but also can minimize the discrepancy between the exact and the derived numerical phase velocities.**

**欢迎大家参加！**