

**Center for Quantum Science and Engineering (CQSE)
&
National Center of Theoretical Sciences (NCTS/TPE)**

**Joint Seminar
May 14, 2010 (Friday)**

Time: May 14, 2:30pm ~ 3:30pm

Title: Optical Wave Guiding and Its Numerical Modeling

Speaker: Prof. Hung-chun Chang (張宏鈞)

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Place: Rm716, CCMS & New Physics Building, NTU

Abstract

Optical wave guiding is a basic physical process in optical transmission systems and photonic chips. Optical waveguides are the structures supporting such processes. Over the past decade, several new waveguide structures have been invented or proposed, such as photonic crystal fibers, nanophotonic waveguides, plasmonic waveguides, etc. Numerical analysis and modeling are indispensable in investigating the electromagnetic characteristics of eigenmodes of waveguides and then the design of appropriate structures. Finite difference and finite element based methods have been most often employed to establish required waveguide mode solvers. The development of some mode solvers will be described in this talk, and the study of several special waveguide structures including those for terahertz signal transmission will be presented.

