

# Center for Quantum Science and Engineering (CQSE) North Center for Theoretical Sciences (NCTS)

## 「11/21/2008 (Fri.) Joint Seminar」

- **Time** : 2:30 PM - 3:30 PM
- **Place** : RM111, New Physics Building
- **Speaker**: Professor Weichung Wang (王偉仲)  
Department of Mathematics, NTU
- **Title** : Large-Scale Polynomial Eigenvalue Problems  
Arising in Simulations of Quantum Dots
- **Abstract** : Numerical simulation is a useful tool for investigating energy spectrum and wave functions of various quantum dot structures. Schrodinger's equations in three dimensions are first discretized by novel second order finite difference and finite volume schemes. Jacobi-Davidson type algorithms are then proposed to compute interior eigenpairs of the resulting polynomial eigenvalue problems.