

# Center for Quantum Science and Engineering (CQSE)

Weekly Seminar  
May 13, 2011 (Friday)

TIME May 13, 14:30 ~ 15:30  
TITLE Theoretical studies of electron transport in nanostructure junctions  
SPEAKER Dr. Yia-Chung Chang 張亞中博士  
Research Center for Applied Sciences, Academia Sinica  
PLACE Rm716, CCMS & New Physics Building, NTU

## Abstract

Physics and theoretical modeling of quantum dot tunneling devices such as single-electron transistors (SETs), nanostructure transistor, quantum-dot memory, and spin filters will be discussed. The theoretical modeling of transport calculations is based on non-equilibrium Green's function method. Physical phenomena such as electron tunneling, Coulomb blockade, charge swapping, and spin blockade in these devices will be explored.

