# Quantum Dot Quantum Computing

S. W. Hwang[*, a] and D. Ahn[b]

[a] Korea University, Seoul, Korea

[b] Institute of Quantum Information Processing & Systems, University of Seoul, Seoul, Korea

Quantum dot is a semiconductor ultra-small island that can confine electrons. The small size leads to appreciable quantum energy level spacing and control over electron occupation is quite possible. Such quantum dots are known to be a building block of qubits quantum gates. In this talk, several proposals of forming quantum-dot qubits and quantum gates will be discussed. Various time-domain experiments in iQUIPS will also be presented.

keywords : Quantum dot, quantum computing