

Postdoctoral Positions: Semiconductor Quantum Dot Multi Qubit Control

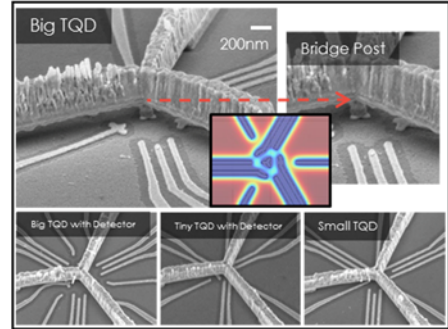
DKim group – Laboratory for Integrated Quantum Systems

Department of Physics and Astronomy

Seoul National University, South Korea

Dohun Kim group has openings for postdoctoral fellows in the area of gate defined semiconductor quantum dots and quantum computing.

Recent advances in our group includes (1) fabrication of triangular, triple quantum dot in GaAs or Si/SiGe toward 2D control of quantum dot couplings and realization of multi qubits in semiconductors, (2) development optimal quantum control pulse sequence for noise resilient quantum processing, and (3) RF-reflectometry-based single shot measurement of quantum dots. The successful applicants will work with a dynamic group of researchers developing semiconductor quantum and nano-electronics.



Possible projects include, but not limited to :

- (1) Single-shot measurement of electron pair-tunneling in triple quantum dots in GaAs.
- (2) Design, fabrication, and measurement of Si/SiGe multi spin qubit array.
- (3) Implementation of holonomic gate pulse sequence in multiple quantum dot charge qubits.

Recent publications and more details about our research can be found at: www.iqslab.net

Expertise in some of the following areas is required: nanolithography, nanofabrication, ultra-low temperature electronic measurement, nano-electronics, quantum computing, and/or microwave electronics.



State-of-the-art facilities for work in all of these areas are available. The Seoul National University is one of the largest research universities in South Korea. Its facilities include a large, fully equipped clean room, excellent facilities for microscopy and nanolithography, and, in DKim group, extensive low-temperature electronic and microwave measurement capabilities.

Applicants should submit by email a CV and arrange to have three letters of reference sent to:

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