

CS Department Seminar



Dr. Vicky Choi

Scientist

D-Wave Systems Inc,

Friday, March 14, 2008

4:30 P.M.

VT-Knowledgeworks II Building

Corporate Research Center

Room 1127

Minor-Embedding in Adiabatic Quantum Computation

In this talk, I'll give a brief introduction to Adiabatic Quantum Computation (AQC), as proposed by Fahri et al. in 2000. In particular, I will explain how to solve the NP-hard Maximum Independent Set (MIS) problem, and the general Quadratic Unconstrained Binary Optimization (QUBO) problem, using an adiabatic quantum computer that implements Ising spin-1/2 Hamiltonians. I will mention several algorithmic problems related to the minor-embedding in AQC.

Dr. Vicky Choi is a scientist at D-Wave Systems Inc. She is currently on leave of absence as an Assistant Professor in the Department of Computer Science, Virginia Tech.