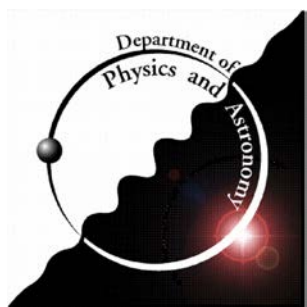




PHYSICS AND ASTRONOMY COLLOQUIUM

Dr. Trevor Lanting

D-Wave Systems Inc.

“Overview of Quantum Annealing Processors”

Abstract

Processors that harness quantum mechanics for computational advantage hold immense promise, but present challenges in scaling to a practical size. We have built a series of scalable processors that implement a single algorithm, quantum annealing (QA). QA is run on a network of superconducting flux qubits with *in situ* programmable pair-wise magnetic interactions. I will introduce the QA algorithm and provide an overview of the architecture, devices, programmability, and performance of these QA processors. I will also discuss a series of recent measurements that confirm that these processors have access to quantum mechanical resources during the QA algorithm.

Wednesday, October 28, 2015

3:00 p.m.

Elliott Building

Room 167