



THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics
COLLOQUIUM

What Can We Do with a Few Qubits in the Lab?

by

Dr. Man-Hong YUNG (翁文康博士)
Department of Chemistry and Chemical Biology
Harvard University, USA

Date: January 18, 2012 (Wednesday)

Time: 4:30 - 5:30 p.m.

Place: L2 Science Centre, CUHK

(Light refreshments will be served 20 minutes prior to the colloquium.)

ALL INTERESTED ARE WELCOME

Abstract

The development of quantum information science has progressed rapidly in recent years. Many breakthroughs have been achieved theoretically and experimentally. Although the precision required for large-scale quantum information processing is still out of reach from the currently available technology, many interesting proof-of-principle experiments have been demonstrated. These experiments will help us identify the barriers for scaling up the simulations.

In this talk, I will review and preview what we can do with a few qubits in the lab, but I will focus mostly on the experimental works our group involved in recent years. Through the examples given in the talk, we will see that the field of quantum information science proves a unique platform for theorists and experimentalists to interact and collaborate with one another.