

***JOINT COLLOQUIUM – DEPARTMENT OF PHYSICS,  
UNIVERSITY OF HONG KONG AND  
PHYSICAL SOCIETY OF HONG KONG***

**Nanomagnets: Poles or no Poles**



**Prof. Chia-Ling Chien**

Department of Physics and Astronomy  
Johns Hopkins University

Nanomagnets are small magnets with well-defined shapes in the submicron size range. The exchange energy and magnetostatic energy are of similar magnitude in nanomagnets such that one can tune the size and shape of the nanomagnets to produce very different spin structures, some of which have no counterparts in macroscopic magnets. Nanomagnets also display fascinating dynamics under a DC or an AC magnetic field dictated by their spin structures. Many important technologies, from read-heads to MRAM, utilize patterned nanomagnets, where the size and shape of the nanomagnets are as important as the intricate effect that enables the technology.

Prof. Chia-Ling Chien is the Jacob L. Hain Professor of Physics and the Director of the Material Research Science and Engineering Center at The Johns Hopkins University. He is one of the most cited physicists world-wide. Prof. Chien is a Fellow of the American Physical Society, the 2004 recipient of the David Adler Award of the American Physical Society, and the 2005 Distinguished Lecturer of the Magnetics Society of IEEE.

Prof. Chien's current research interests include fabrication of nanostructured materials and the studies of their structural, electronic, magnetic, and superconducting properties; highly spin polarized materials, spin-transfer torque effects, and magnetoelectronics.

**Monday, October 15, 2007, 4:00 pm**

Lecture Theatre P2

Chong Yuet Ming Physics Building

Coffee and tea will be served 20 minutes prior to the seminar

Department of Physics, The University of Hong Kong, Chong Yuet Ming Physics Building  
*Phone: 28592360 Fax: 25599152. Anyone interested is welcome to attend.*