



Collaborative Graduate Specialization in  
**Computational  
Science and Engineering**

# WEEKLY COLLOQUIUM

Tuesday, 16 January 2007  
2:30-3:30 in Goodes 303

**Speaker:** UE-LI PEN, Associate Professor  
Canadian Institute of Theoretical Astrophysics  
University of Toronto

**Title:** Shedding Light on the Galactic Center Black Hole

**Abstract:** One of the current enigmas is the faintness of the galactic center black hole, which is 10,000,000 times fainter than predicted from expected accretion rates. We have performed ab initio massively parallel MHD simulations to understand the global dynamics of the infalling gas, which suggests a new paradigm for a state of magnetically congested flows, that may explain the observed properties.

**About the speaker:**

*Dr. Pen received his Ph.D. from Princeton in 1995. His research interests in theoretical cosmology include structure formation, magneto-fluid dynamic simulations, gravitational lensing, topological defects, CMB and early universe. After graduating from Princeton, Dr. Pen spent three years at Harvard as a Junior Fellow before joining CITA at the University of Toronto in 1998.*