

**THE CHINESE UNIVERSITY OF HONG KONG**

*Department of Statistics*

will present a seminar entitled

**Financial Crises and Mutually Exciting Jumps**  
(joint work with Julio Cacho-Diaz, Ton Hurd and Roger Laeven)

by

**Dr. Yacine Ait-Sahalia**  
**Professor, Department of Economics**  
**Director, Bendheim Center for Finance**

on

**Tuesday, 29 June 2010**

**2:00pm – 3:00pm**

in

**Lady Shaw Building G35**  
**The Chinese University of Hong Kong**

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**Abstract:**

Adverse shocks to stock markets propagate across the world, with a jump in one region of the world seemingly causing an increase in the likelihood of a different jump in another region of the world. To capture this effect mathematically, we introduce a model of asset return dynamics involving mutually exciting processes. In the model, a jump in one region of the world or one segment of the market increases the intensity of jumps occurring both in the same region (self-excitation) as well in other regions (cross-excitation). The model generates the type of jump clustering that is observed empirically. Jump intensities then mean-revert until the next jump. We develop and implement an estimation procedure for this model. We find that most US jumps get reflected quickly in other markets, while there is little statistical evidence for the reverse, and discuss some of the implications of the model for risk management and optimal portfolio choice.

**All are Welcome**