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Department of Information and Systems Management  
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# **ON A THRESHOLD MULTIVARIATE GARCH MODEL**

by

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***Date:* November 30, 2007 (Friday)**

***Time:* 4:00 p.m. - 5:00 p.m.**

***Venue:* Room 3416 (Lift 17/18)**

## Abstract

This paper proposes a threshold multivariate GARCH model (Threshold MGARCH) which integrates threshold nonlinearity, mean and volatility asymmetries and time-varying correlation in financial markets. The main feature of this model is that the threshold variable for regime switching is governed by the average of lagged observations or aggregate lagged observations instead of a single return. In addition, Bayesian estimation is carried out by Markov Chain Monte Carlo (MCMC) methods such that all unknown parameters including the threshold value, time delay and lags can be estimated jointly as well as inference for model selection can be performed simultaneously. Simulation and applications on international markets are also performed.

This is a joint work with Dr. Mike K. P. So.

**All interested are welcome!**

For details, please contact Department of ISMT.