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# Joint Statistics Seminar

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*The Hong Kong University of Science and Technology*

## Jump and Volatility Analysis for High-Frequency Financial Data

by

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**Date: June 29, 2007 (Friday)**

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

**Venue: Room 3401 (Lift 17 & 18)**

### Abstract

Volatilities of asset returns are pivotal for many issues in financial economics. The availability of high frequency intraday data allows us to accurately estimate stock volatility. Because asset prices often have jumps, and high-frequency data are contaminated with market microstructure noise, common approach of estimating integrated volatility is to sample from available data and use the obtained subsample (a fraction of the original data) to compute realized volatility and realized bipower variation. In this paper we propose wavelet based multiscale methods to perform jump analysis in price processes, and estimate integrated volatility and, if jump(s) occurs, recover jump variation. We establish asymptotic theory for the methods and study their efficiency for finite sample. This is a joint work with Jianqing Fan.

❖ **All interested are welcome!** ❖

*For details, please contact ISMT Department.*