
Joint Statistics Seminar

The Hong Kong University of Science and Technology

Multivariate Stochastic Volatility with Cross Leverage

by

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Time: 11:00 a.m. - 12:00 noon

Venue: Room 3416 (Lift 17/18)

Abstract

Two important multivariate stochastic volatility models are proposed to describe factors and leverage effects in multivariate financial time series. The first model is obtained as a natural extension of the univariate stochastic volatility model with leverage where we further incorporate cross leverage effects among stock returns. The second model is the multivariate factor stochastic volatility model where each factor follows the univariate stochastic volatility model with leverage.

Using a Bayesian approach, the efficient estimation methods are proposed using Markov chain Monte Carlo method. The proposed methods are illustrated using numerical examples and are applied to stock returns in Tokyo Stock Exchange. The comparison of proposed models is conducted using marginal likelihood in our empirical study.

❖ *All interested are welcome!* ❖

For details, please contact ISOM Department.