



DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

40th Anniversary Seminar

Professor Andrew HARVEY

*Faculty of Economics
Cambridge University
U.K.*

will give a talk

entitled

**TIME-VARYING QUANTILES
AND TESTS OF TIME INVARIANCE**

Abstract

A time-varying quantile can be fitted to a sequence of observations by formulating a time series model for the corresponding population quantile and iteratively applying a suitably modified state space signal extraction algorithm. Quantiles estimated in this way provide information on various aspects of a time series, including dispersion, asymmetry and, for financial applications, value at risk. Tests for the constancy of quantiles, and associated contrasts, are constructed using indicator variables; these tests have a similar form to stationarity tests and, under the null hypothesis, their asymptotic distributions belong to the Cramér von Mises family. Estimates of the quantiles at the end of the series provide the basis for forecasting. As such they offer an alternative to conditional quantile autoregressions and, at the same time, give some insight into their structure and potential drawbacks.

on

Wednesday, September 19, 2007

2:00 p.m. – 3:00 p.m.

at

**Room 524, Meng Wah Complex
(behind the Chong Yuet Ming Amenities Centre)**

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