# 國立高雄大學統計學研究所
# 演講通知

講　題：**Multivariate Volatility Modeling: Review and A New Approach**

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時　間：**2011年10月5日（星期三）下午3：30～4：30**

地　點：統計所多媒體教室（理學院320室）

茶　會：下午 3：00 於統計所辦公室（理學院 325 室）

## 摘要

Multivariate volatility modeling faces two major difficulties. The first difficulty is the explosion of high dimension and the second one is the positive-definite constraint. In this talk, we provide a brief review of various approaches available in the literature to overcome these difficulties. There are two general approaches available. The first approach is to use components or factor models and the second approach uses parameter constraints.

We then propose a new approach for multivariate volatility modeling. The approach is based on the dynamic orthogonal components (DOC), which are between the principal components and independent components. Advantages of the DOC are discussed. We demonstrate application of the DOC approach by some examples.

A procedure is proposed to estimate the DOCs for a given vector asset returns. The existence of DOCs is tested, not assumed, in real applications. Consistency and asymptotic normality of the DOCs are given.

(This work is joint with David Matteson of Cornell University and the attached paper will appear in the Journal of the American Statistical Association.)

近期演講內容：**http://www.stat.nuk.edu.tw/**
高大交通資訊：**http://www.stat.nuk.edu.tw/traffic.htm**

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