*For favour of posting*

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Departmental Seminar


# Dr. Muyi LI

Wang Yanan Institute for Studies in Economics (WISE)
Xiamen University
China


will give a talk
entitled

# RANDOM WEIGHTING ON MULTIVARIATE PORTMANTEAU TESTS FOR VECTOR AUTOREGRESSIVE MODELS WITH UNCORRELATED BUT NONINDEPENDENT ERRORS


**Abstract**

We consider goodness-of-fit tests in vector autoregressive models with uncorrelated but not necessarily independent innovations. In this framework, the most popular Box-Pierce (BP) and Ljung-Box (LB) portmanteau tests are severely over-sized if the usual chi-square distributions are employed to set critical values. This is due to the misspecification of the covariance matrix of residual autocorrelations. To address this issue, we employ the random weighting approach to modify these tests and justify its validity. A set of Monte Carlo simulations are conducted to demonstrate the finite-sample performances of the testing procedures. A real example of quarterly GNP growth rate and the civilian unemployment rate in Evans (1989) is revisited, which illustrates our tests can reduce the risk of overparameterization in vector autoregressive models.


on

**Friday, August 16, 2019**

***(Refreshments will be served from 10:45 a.m. outside Room 301 Run Run Shaw Building)***

**11:00 a.m. – 12:00 noon**

at

**Room 301, Run Run Shaw Building**

**Visitors Please Note that the University has limited parking space. If you are driving please call the Department at 3917 2466 for parking arrangement.**

All interested are welcome