

*For favour of posting*

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE  
THE UNIVERSITY OF HONG KONG

Seminar

**Professor Bin NAN**

Department of Biostatistics  
School of Public Health  
University of Michigan  
U.S.A.

will give a talk

entitled

**LARGE COVARIANCE/CORRELATION MATRIX  
ESTIMATION FOR TEMPORAL DATA**

Abstract

We consider the estimation of high-dimensional covariance and correlation matrices under slow-decaying temporal dependence. For generalized thresholding estimators, convergence rates are obtained and properties of sparsistency and sign-consistency are established. The impact of temporal dependence on convergence rates is also investigated. An intuitive cross-validation method is proposed for the thresholding parameter selection, which shows good performance in simulations. Convergence rates are also obtained for banding method if the covariance or correlation matrix is bandable. The considered temporal dependence has longer memory than those in the current literature and has particular implications in analyzing resting-state fMRI data for brain connectivity studies.

on

**Wednesday, January 28, 2015**

*(Refreshments will be served from 2:15 p.m. outside Room 301 Run Run Shaw Building)*

**2:30 p.m. – 3:30 p.m.**

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