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DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Seminar

Dr. LENG Chenlei

Department of Statistics and Applied Probability
National University of Singapore
Singapore

will give a talk

entitled

A MOVING AVERAGE CHOLESKY FACTOR MODEL IN COVARIANCE MODELING FOR LONGITUDINAL DATA

Abstract

We propose new regression models for parameterizing covariance structures in longitudinal data analysis. Using a novel Cholesky factor, the entries in this decomposition have moving average and log innovation interpretation and are modeled as linear functions of covariates. We propose efficient maximum likelihood estimates for joint mean-covariance analysis based on this decomposition and derive the asymptotic distributions of the resulting coefficient estimates. Furthermore, we study a computationally more efficient local search algorithm than the traditional all subset selection, based on BIC for model selection, and show its model selection consistency. Thus, a key conjecture made by Pan and Mackenzie (2003) can be similarly verified. We demonstrate the finite-sample performance of the proposed method via analysis of the CD4 data and simulations. This is joint work with Weiping Zhang from University of Science and Technology of China.

on

Friday, September 24, 2010

3:00 p.m. – 4:00 p.m.

at

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

Visitors Please Note that the University has limited parking space. If you are driving please call the Department at 2859 2466 for parking arrangement.

All interested are welcome