For favour of posting

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

50th Anniversary Seminar Series

Dr. Heng LIAN

Department of Mathematics
City University of Hong Kong
Hong Kong

will give a talk

entitled

DIMENSIONALITY REDUCTION AND VARIABLE SELECTION IN MULTIVARIATE VARYING-COEFFICIENT MODELS

Abstract

Motivated by the study of gene and environment interactions, we consider a multivariate response varying-coefficient model with a large number of covariates. The need of nonparametrically estimating a large number of coefficient functions given relatively limited data poses a big challenge for fitting such a model. To overcome the challenge, we develop a method that reduce the number of unknown functions to be estimated by using principal components and apply sparsity-inducing penalization to select relevant covariates. Our asymptotic theory shows that the proposed method can consistently identify relevant covariates and can estimate the corresponding coefficient functions with the same convergence rate as when only the relevant variables are included in the model. Our method is illustrated using data from Framingham Heart Study.

on

Wednesday, May 10, 2017

(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