

For favour of posting



DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

50th Anniversary Seminar Series

Professor Xihong LIN

Henry Pickering Walcott Professor of Biostatistics
Chair, Department of Biostatistics
Departments of Biostatistics and Statistics
Harvard University
USA

will give a talk
entitled

**HYPOTHESIS TESTING FOR WEAK AND SPARSE
ALTERNATIVES WITH APPLICATIONS TO
WHOLE GENOME DATA**

Abstract

Massive genetic and genomic data generated using array and sequencing technology present many exciting opportunities as well as challenges in data analysis and result interpretation, e.g., how to develop effective strategies for signal detection using massive genetic and genomic data when signals are weak and sparse. In this talk, I will discuss hypothesis testing for sparse alternatives in analysis of high-dimensional data motivated by gene, pathway/network based analysis in genome-wide association studies using arrays and sequencing data. I will focus on signal detection when signals are weak and sparse, which is the case in genetic and genomic association studies. I will discuss hypothesis testing for signal detection using variable selection based penalized likelihood based methods, the Generalized Higher Criticism (GHC) test, and the Generalized Berk-Jones test, and the robust omnibus test. I will discuss the challenges in statistical inference in the presence of both between-observation correlation and signal sparsity. The results are illustrated using data from genome-wide association studies and sequencing studies.

on

Friday, June 30, 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