

For favour of posting



DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

50th Anniversary Seminar Series

Professor Tony CAI

Department of Statistics
The Wharton School
University of Pennsylvania
USA

will give a talk
entitled

**STATISTICAL AND COMPUTATIONAL LIMITS FOR
SUBMATRIX LOCALIZATION AND SPARSE MATRIX
DETECTION**

Abstract

In the conventional statistical framework, the goal is developing optimal inference procedures, where optimality is understood with respect to the sample size and parameter space. When the dimensionality of the data becomes large as in many contemporary applications, the computational concerns associated with the statistical procedures come to the forefront. A fundamental question is: Is there a price to pay for statistical performance if one only considers computable (polynomial-time) procedures? After all, statistical methods are useful in practice only if they can be computed within a reasonable amount of time.

In this talk, we discuss the interplay between statistical accuracy and computational efficiency in two specific problems: submatrix localization and sparse matrix detection based on a noisy observation of a large matrix. The results show some interesting phenomena that are quite different from other high-dimensional problems studied in the literature.

on

Wednesday, January 10, 2018

(Refreshments will be served from 4:15 p.m. outside Room 301 Run Run Shaw Building)

4:30 p.m. – 5:30 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