

For favour of posting

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Departmental Seminar

Dr. Dora Yan ZHANG

Department of Biostatistics
Bloomberg School of Public Health
Johns Hopkins University
USA

will give a talk
entitled

**ESTIMATION OF COMPLEX EFFECT-SIZE
DISTRIBUTIONS USING SUMMARY-LEVEL STATISTICS
FROM GWAS**

Abstract

Nowadays, sample sizes for genome-wide association studies (GWAS) of many complex traits have been rising rapidly due to the successes of large consortia. The yields of future GWAS critically depend on the underlying effect-size distributions. Summary-level statistics from GWAS have been widely used to estimate heritability and co-heritability of traits using the popular linkage-disequilibrium (LD) score regression method. In this talk, I will present a novel likelihood-based approach for analyzing summary-level statistics and external LD information to estimate effect-size distributions of common variants. The effect-size distribution is characterized by the proportion of underlying susceptibility SNPs and a flexible normal-mixture model for their effects. We applied the proposed method to analyze the summary-level data across 32 GWAS, and identified a wide diversity in genetic architecture of the traits, with consequences for the yields of future GWAS in terms of discovery and risk prediction.

on

Wednesday, January 30, 2019

(Refreshments will be served from 11:00 a.m. outside Room 301 Run Run Shaw Building)

11:15 a.m. – 12:15 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