DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Departmental Seminar

Dr. Jinzhu JIA

Associate Professor of Biostatistics
School of Public Health
Peking University, China

will give a talk
entitled

ON THE EFFICIENCY OF LOGISTIC REGRESSION ESTIMATORS IN ESTIMATING THE CASUAL EFFECT

Abstract

This talk is about the Logistic Regression Estimators of the Average Treatment Effect (ATE) in randomized experiments, when the potential outcomes are binary variables. Based on some regularity conditions, exact expressions of asymptotic variances of the estimators are provided which is considered to be an important criterion for evaluating asymptotic efficiency. Also, we will compare efficiency of different estimators of ATE (including the regression adjustment estimator) and prove some important results. We find that introducing interaction terms between the assignment variable and the covariate sometimes helps improve asymptotic efficiency. Numerical simulations are carried out to verify the theoretical results and a counterexample is given to show that sometimes introducing interaction terms in Logistic Regression might make the estimator of ATE less efficient.

on

Wednesday, July 24, 2019

(Refreshments will be served from 10:45 a.m. <u>outside Room 301 Run Run Shaw Building</u>)

11:00 a.m. – 12:00 noon

at

Room 301, Run Run Shaw Building

<u>Visitors Please Note</u> 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