DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

<u>Seminar</u>

Professor Jianwen CAI

Department of Biostatistics
University of North Carolina
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will give a talk

entitled

MORE EFFICIENT ESTIMATOR FOR ADDITIVE HAZARD MODEL FOR CASE-COHORT STUDIES

<u>Abstract</u>

The case-cohort study design has often been used in studies of a rare disease or for a common disease but with limited stored biospecimen from the participants. A case-cohort study design consists of a random sample, called the subcohort, and all or a portion of the subjects with the disease of interest. One advantage of the case-cohort design is that the same subcohort can be used for studying multiple diseases. In multiple case-cohort studies, covariates collected on subjects with other diseases are available when estimating the risk effect on one disease. Usually, the analysis is done separately for each disease ignoring data collected on subjects with the other diseases. We propose a more efficient estimator by making full use of available covariate information for the additive hazards model with data from case-cohort study designs. We propose an estimating equation approach with a new weight function. The proposed estimators are shown to be consistent and asymptotically normally distributed. Simulation studies show that the proposed method using all available information leads to efficiency gain. Our proposed method is applied to data from the Atherosclerosis Risk in Communities (ARIC) study.

on

Monday, June 23, 2014

10:30 a.m. – 11:30 a.m.

at

Room 524, Meng Wah Complex
(behind the Chong Yuet Ming Amenities Centre)

<u>**Visitors Please Note**</u> **that the University has limited parking space. If you are driving please call the Department at 2859 2466 for parking arrangement.**

All interested are welcome