

For favour of posting

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE  
THE UNIVERSITY OF HONG KONG

Departmental Seminar

**Professor L.J. WEI**

Department of Biostatistics  
Harvard University  
USA

will give a talk  
entitled

## **MYTH OF REGRESSION ANALYSIS**

Abstract

Regression analysis has been one of the center pieces in statistical data science. A regression model relates the outcome variable and covariates (or independent variables). There are two main goals for regression analysis, association and prediction. The quantification of association is difficult in general. This becomes more complex when there are confounders in the model. Estimators from different models likely result in estimating quite different population parameter. On the other hand, prediction is relatively easy to interpret. However, it is not totally clear how to choose a proper or clinically interpretable metric for model selection and validation. In this talk, we will use the ANCOVA (analysis of covariance) as an example to illustrate the above challenges. The ANCOVA is to increase estimation precision of estimators for treatment effect in a comparative, randomized clinical trial. We will present a nonparametric alternative to ANCOVA to estimate the treatment effect. The proposal is illustrated with data from a cardiovascular study to compare various treatment strategies.

on

**Thursday, November 29, 2018**

*(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