

For favour of posting

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Seminar

Dr. Yisheng LI

Department of Biostatistics
Division of Quantitative Sciences
The University of Texas MD Anderson Cancer Center
Houston, U.S.A.

will give a talk

entitled

**CENTER-ADJUSTED INFERENCE FOR A NONPARAMETRIC
BAYESIAN RANDOM EFFECT DISTRIBUTION**

Abstract

Dirichlet process (DP) prior models are a popular choice for semiparametric Bayesian random effect models. The fact that the DP prior implies a non-zero mean for the random effect distribution creates an identifiability problem which complicates the interpretation of and inference for the fixed effects that are paired with the random effects. Similarly, the interpretation of and inference for the variance components of the random effects also become a challenge. We propose an adjustment of conventional inference using a post-processing technique. This technique is based on an analytic evaluation of the moments of the random moments of the DP. The adjustment for the moments of the DP can be conveniently incorporated into the Markov chain Monte Carlo simulations at essentially no additional computational cost. We conduct simulation studies to evaluate the performance of the proposed inference procedure in both a linear mixed model and a logistic linear mixed effect model. We illustrate the method by applying it to a prostate specific antigen dataset. We provide an R function that allows investigators to implement the proposed adjustment in a post-processing step of posterior simulation output, without any change to the posterior simulation itself.

This is a joint work with Peter Mueller and Xihong Lin.

on

Wednesday, June 23, 2010

2:00 p.m. – 3:00 p.m.

at

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

Visitors Please Note 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