

*For favour of posting*

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE  
THE UNIVERSITY OF HONG KONG

Seminar

**Dr. Hyokyong Grace HONG**

Department of Statistics and CIS  
The Baruch College  
The City University of New York  
USA

will give a talk

entitled

**PREDICTION OF FUNCTIONAL STATUS FOR THE ELDERLY  
BASED ON A NEW ORDINAL REGRESSION MODEL**

Abstract

The functional mobility of the elderly is a very important factor in aging research, and prognostic information is valuable in making clinical and health care policy decisions. We develop a predictive model for the functional status of the elderly based on data from the Second Longitudinal Study of Aging (LSOA II). The functional status is an ordinal response variable. The ordered probit model has been moderately successful in analyzing such data; however, its reliance on the normal distribution for its latent variable hinders its accuracy and potential. In this talk, we focus on the prediction of conditional quantiles of the functional status based on a more general transformation model. The proposed estimation procedure does not rely on any parametric specification of the conditional distribution functions, aiming to reduce model misspecification errors in the prediction. Cross-validation within the LSOA II data shows that our prediction intervals are more informative than those from the ordered probit model. Monte Carlo simulations also demonstrate the merits of our approach in the analysis of ordinal response variables.

Keywords: Nonparametric transformation model, Ordinal data, Quantile regression, Second Longitudinal Study of Aging

on

**Wednesday, December 2, 2009**

**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