For favour of posting

For Internal Only

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Departmental Seminar

Dr. Yingying ZHANG

Academy of Statistics and Interdisciplinary Sciences
East China Normal University
China

will give a talk

entitled

SINGLE-INDEX THRESHOLDING IN QUANTILE REGRESSION

Abstract

Threshold regression models are useful for identifying subgroups with heterogeneous parameters. The conventional threshold regression models split the sample based on a single and observed threshold variable, which enforces the threshold point to be equal for all subgroups of the population. In this paper, we consider a more flexible single-index threshold model in the quantile regression setup, in which the sample is split based on a linear combination of predictors called single-index. We propose to smooth the indicator function in thresholding, which enables Gaussian approximation for statistical inference and allows characterization of the limiting distribution when the quantile process is interested. We further construct a Mixed-bootstrap inference method with faster computation and a testing procedure in order to investigate if the threshold parameters vary across quantile levels. Finally, we demonstrate our methods via simulation studies, as well as through an application to executive compensation data.

on

Wednesday, December 18, 2019

(Refreshments will be served from 11:15 a.m. outside Room 301 Run Run Shaw Building)

11:30 a.m. – 12:30 p.m.

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