The Fox School of Business

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Department of Statistics

Temple University

ANNOUNCES A
COLLOQUIUM

Dr. Zhibiao Zhao

Pennsylvania State University

will speak on

Efficient Regressions via Optimally Combining Quantile Information

Time: 3:00 PM – 4:00 PM
Date: Friday, October 14, 2011
Place: Speakman Hall 215

Abstract

We study efficient estimation of regression models via quantile regression. Both the classical parametric linear regression model and the nonparametric regression model are investigated. We argue that it is crucial to choose optimal combination of information over quantiles. We investigate both the weighted composite quantile regression estimator based on quantile weighted loss functions, and the weighted quantile average estimator based on a weighted average of quantile regression estimators at single quantiles. Efficient regression estimators based on optimal weighting schemes are proposed. In the case of non-regular statistical estimation, the proposed estimators lead to super-efficient estimation. Asymptotic properties of the proposed estimators are studied and efficiency comparison is conducted among these estimators and other estimators such as the ordinary least squares estimator and the least-absolute-deviation estimator. We also conduct Monte Carlo experiments to investigate the sampling performance of the proposed estimators. This is based on a joint work with Zhijie Xiao.

Guest Parking Available in the **Liacouras Garage**
(Located on **15th Street between Montgomery** and **Cecil B. Moore Avenues**)