The University of Chicago
Department of Statistics

Ph.D. Seminar

ZHOU ZHOU
Department of Statistics
The University of Chicago

Simultaneous Inference of Linear Models with Time-Varying Coefficients

MONDAY, July 13, 2009, at 2:00 PM
110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

The talk considers construction of simultaneous confidence tubes (SCT) for time-varying regression coefficients in functional linear models. Using a Gaussian approximation result for non-stationary multiple time series, we show that the constructed SCTs have asymptotically correct nominal coverage probabilities. Our results are applied to the problem of testing whether the regression coefficients are of certain parametric forms, a fundamental problem in the inference of functional linear models. As an application, we analyze an environmental data set and study the relation between levels of pollutants and hospital admissions. Another application involves testing of parameter constancy in a capital asset pricing model.

Information about building access for persons with disabilities may be obtained in advance by calling Kelly Macias at 773.834.5169 or by email (kmacias@galton.uchicago.edu).