The University of Chicago
Department of Statistics

Seminars for Fourth Year Ph.D. Students

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Local Linear Quantile Estimation for Non-stationary Time Series

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ABSTRACT

We consider estimation of quantile curves for a general class of non-stationary processes. Consistency and central limit results are obtained for local linear quantile estimates under a mild short-range dependence condition. Our results are applied to environmental data sets. In particular, our results can be used to address the problem of whether climate variability has changed, an important problem raised by IPCC (Intergovernmental Panel on Climate Change) in 2001. This presentation is mainly based on a recent paper available at http://www.stat.uchicago.edu/~zhou/quantile.pdf.

Information about building access for persons with disabilities may be obtained in advance by calling Karen Gonzalez (Department Administrator and Assistant to Chair) at 773.702.8335 or by email (karen@galton.uchicago.edu).