



The University of Chicago  
Department of Statistics  
Master's Seminar

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**JUN LIU**

Department of Statistics  
The University of Chicago

**“The Impact of Market Microstructure Noise  
on Non-parametric Jump Test”**

**WEDNESDAY February 22, 2006 at 2:00 PM  
110 Eckhart Hall, 5734 S. University Avenue**

**ABSTRACT**

Significant improvements have been made in financial return volatility and measurement and prediction through the use of realized variation from high-frequency returns coupled with simple modeling procedures. Barndorff-Nielsen and Shephard (2004a, 2005) provides a framework for non-parametrically measuring the jump component in return volatility. The scheme is based on the results for bi-power measures. However, the volatility of efficient return process and the volatility of the microstructure noise are two crucial components of the volatility of the continuously-compounded returns. The market microstructure noise carries a statistical importance in high-frequency returns. Although Barndorff-Nielsen and Shephard's work has demonstrated practical and robust characteristics of the non-parametric jump tests, we find that the framework is subjected to market microstructure noise.