



The University of Chicago
Department of Statistics

MASTER'S THESIS PRESENTATION

JIAN WANG

Department of Statistics
The University of Chicago

**Bandwidth Selection Based on Intersection
Confidence Interval Rule**

THURSDAY, May 12, 2011, at 3:30 PM
110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

Although nonparametric kernel density estimation is nowadays a standard technique in explorative data analysis, there is still a big dispute on how to choose the bandwidth. In this paper, a new method of kernel density estimation with a varying adaptive window size is reviewed. It is based on the so-called intersection of confidence intervals (ICI) rules. Then, application of ICI rule for local constant regression is developed. Qualities of the density and regression estimates are assessed based on numerical simulations.