STATISTICS DEPARTMENT  SEMINAR

TITLE: **INFERENCE FOR QUANTILE REGRESSION MODELS**

SPEAKER: Xuming He
Department of Statistics, University of Illinois

TIME: 4:00 P.M.

DATE: Wednesday, October 4, 2006

ROOM: 140 BARDEEN

ABSTRACT:

Quantile regression models are increasingly popular in a wide range of applications. It is easy to argue that the usual regression models that focus on conditional means are often inadequate to reflect inhomogeneity or to capture some interesting part of the population. As the quantile regression approach gains popularity in the econometrics, statistics and biostatistics literature, it is important that we have reliable inference tools. In this talk, I will review a number of existing methods for estimating standard errors and for constructing confidence intervals, and explain why it has been difficult for software developers to choose a default method. I will then introduce the Markov chain marginal bootstrap (MCMB) algorithm, and assess its performance in terms of accuracy, speed, and reliability. The MCMB algorithm is not about Bayesian computation, but it is especially appealing for handling high dimensional problems. The current version of the MCMB algorithm for quantile regression is available as an R package or a SAS procedure.

Coffee and Cookies at 3:30 p.m. in Room 1210 MSC