



The University of Chicago
Department of Statistics

Seminar Series

HANNA JANKOWSKI

University of Toronto and University of Washington

Empirical Process Limits under Model Misspecification

MONDAY, February 5, 2007 at 4:00 PM
133 Eckhart Hall, 5734 S. University Avenue

Refreshments following the seminar in Eckhart 110.

ABSTRACT

The understanding of the limiting behaviour of empirical processes has found much application in a wide variety of problems in statistics. In particular, empirical processes are natural quantities to look at when studying the asymptotics of infinite-dimensional data.

In this talk, we consider two types of perturbations, both on the order of $n^{-1/2}$. We show that neither perturbation affects the empirical law of large numbers. However, the first type of perturbation, which we call a perturbation in finitely many directions, causes a change in the mean of the central limit theorem. On the other hand, if we consider perturbations in infinitely many directions, we obtain a change in the variance. For the perturbations, we consider both real-valued and function-valued data.