

MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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Analysis of proportional odds models with censoring and errors-in-covariates

Tuesday, March 15, 2016
10:20 a.m. - 11:10 am
Refreshments 10:00 am
C405 Wells Hall

Abstract

In this talk I will describe a consistent method for estimating both the finite and infinite dimensional parameters of the proportional odds model when a covariate is subject to measurement error and time-to-events are subject to right censoring. The proposed method does not rely on the distributional assumption of the true covariate which is not observed in the data. In addition, the proposed estimator does not require the measurement error to be normally distributed or to have any other specific distribution, and we do not attempt to assess the error distribution. Instead, we construct martingale based estimators through inversion, using only the moment properties of the error distribution, estimable from multiple erroneous measurements of the true covariate. The theoretical properties of the estimators are established and the finite sample performance is demonstrated via simulations. The usefulness of the method will be illustrated by analyzing a dataset from a clinical study on AIDS. This is a joint work with Yanyuan Ma

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