MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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Censored Quantile Regression in High Dimensional Survival Data

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10:20 a.m. - 11:10 am
Refreshments 10:00 am
C405 Wells Hall

Abstract

Censored quantile regression (CQR) has emerged as a useful regression tool for survival analysis. Stochastic integral based estimating equations are commonly used in the estimation of CQR, and pose new challenges in the analysis of CQR for high dimensional survival data. In this work, we study the high dimensional CQR simultaneously over a continuum of quantile indices. We propose a two-step penalization procedure, which accommodates stochastic integral based estimating equations and properly addresses the associated complications. We establish the uniform convergence rates for the proposed estimators, and investigate the properties on weak convergence and variable selection. We conduct extensive numerical studies to confirm our theoretical findings and illustrate the practical utility of our proposals.

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