

MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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Quantile Regression Analysis of High-Dimensional Heterogeneous Data

Tuesday, September 2
10:20 a.m. - 11:10 am
Refreshments 10:00 am
C405 Wells Hall

Abstract

The talk will discuss recent progress on applying quantile regression for analyzing high-dimensional heterogeneous data. To accommodate heterogeneity, we advocate a more general interpretation of sparsity which assumes that only a small number of covariates influence the conditional distribution of the response variable given all candidate covariates; however, the sets of relevant covariates may differ when we consider different segments of the conditional distribution. In this framework, we will discuss linear and semiparametric nonlinear quantile regression models with high-dimensional covariates; efficient calculation using a new iterative coordinate descent algorithm; and quantile-based nonlinear screening for both complete and censored data in ultra-high dimension. (The talk is based on joint work with several collaborators: Xuming He, Grace Hong, Runze Li, Bo Peng, Ben Sherwood, Yichao Wu (in alphabetical order)).

To request an interpreter or other accommodations for people with disabilities, please call the Department of Statistics and Probability at 517-355-9589.