

DEPARTMENT OF MATHEMATICS AND STATISTICS
MISSISSIPPI STATE UNIVERSITY

COLLOQUIUM

Sparse estimation and inference for censored median regression

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Tuesday, April 21 at 3:30 pm

Allen 14

Abstract. Censored median regression models have been shown to be useful for analyzing a variety of censored survival data with the robustness property. We study sparse estimation and inference of censored median regression. The new method minimizes an inverse censoring probability weighted least absolute deviation subject to the adaptive LASSO penalty. We show that, with a proper choice of tuning parameter, the proposed estimator has nice theoretical properties such as root-n consistency and asymptotic normality. The estimator can also identify the underlying sparse model consistently. We propose using a re-sampling method to estimate the variance of the proposed estimator. Furthermore, the new procedure enjoys great advantages in computation, since its entire solution path can be obtained efficiently. The performance of our estimator is evaluated by extensive simulations and a real data application.

Mr. Shows is a candidate for a position in our department. There will be a reception for him in Allen 467 at 3:00 pm.