



The University of Mississippi
Department of Mathematics

STATISTICS SEMINAR

Sparse Estimation and Inference for Censored
Median Regression

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Friday, December 4, 2009

HUME 331

3:00 P.M.

Abstract

Censored median regression has proved useful for analyzing survival data in complicated situations, such as when the variance is heteroscedastic, or the data contain outliers. The sparse estimation for censored median regression is an important problem for high dimensional survival data analysis. A new procedure is proposed to minimize an inverse-censoring-probability weighted least absolute deviation loss subject to the adaptive LASSO penalty and result in a sparse and robust median estimator. With a proper choice of tuning parameter, the procedure can identify the underlying sparse model consistently and has desired large-sample properties including root- n consistency and asymptotic normality. The procedure also enjoys great advantages in computation, since its entire solution path can be obtained efficiently.

Faculty, Staff and Students are welcome