NONPARAMETRIC ERROR-IN-VARIABLES QUANTILE REGRESSION

A.L. Rojas[†], C. Genovese, L. Wasserman

Carnegie Mellon University, Pittsburgh, USA

[†]E-mail: arojas@stat.cmu.edu

Covariate measurement error causes changes in conditional quantile regression functions by altering their shape, orientation and location. However, up to date, few results have been provided to handle this kind of error. In this paper, we develop a nonparametric quantile regression technique based on recently proposed nonparametric regression methods and the deconvolution kernel. Using a simulation study, we show how the proposed estimator outperforms estimators that ignore the presence of measurement error.