CONFIDENCE BANDS IN NONPARAMETRIC REGRESSION WITH LENGTH BIASED DATA

J. A. Cristóbal, J. L. Ojeda and J. T. Alcalá

Department of Statistical Methods, University of Zaragoza, 50009 Zaragoza, Spain

Abstract. In this paper we deduce a confidence bands construction for the nonparametric estimation of a regression curve from length biased data, where a result from Bickel and Rosenblatt (1973, *The Annals of Statistics*, **1**, 1071–1095) is adapted to this new situation. The construction also involves the estimation of the variance of the local linear estimator of the regression, where we use a finite sample modification in order to improve the performance of these confidence bands in the case of finite samples.

Key words and phrases: Confidence bands, length-biased data, nonparametric regression.