

论文

ASYMPTOTIC PROPERTIES OF L_1 -NORM KERNEL ESTIMATOR OF THE CONDITIONAL MEDIAN

HONG Shengyan

Anhui University, Hefei 230039, China

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摘要 Let (X, Y) be a pair of $R^d \times R^1$ -valued random variables. In this paper we investigate the asymptotic properties of the L_1 -norm kernel estimator of the conditional median function of Y on X . Under appropriate regularity conditions, asymptotic normality and the optimal rates of convergence $n^{-1/(2+d)}$ and $(n^{-1} \log n)^{-1/(2+d)}$ in the L_q ($1 \leq q < \infty$) and L_∞ -norms restricted to a compact set, respectively, are obtained. Our study shows that this estimator and the well-known Nadaraya-Watson's kernel estimator of the conditional mean function of Y on X have the same asymptotic properties.

关键词 [L₁-norm kernel estimator](#), [conditional median](#)

分类号

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Key words [L₁-norm kernel estimator](#) [conditional median](#) [rate of convergence](#) [asymptotic normality](#)

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