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ON THE NONPARAMETRIC DENSITY ESTIMATE FOR QUASI-ASSOCIATED HILBERTIAN VARIABLES

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Abstract

We study the nonparametric density estimation of a random variable taking values in separable Hilbert space. The principal aim of this paper is to establish under general condition and by using the exponential inequality, the almost complete convergence rates of the density estimator, when the variables are functional quasi-associated.

Keywords and phrases: functional Hilbert space, nonparametric estimation, kernel density estimation, small balls probability, weak-dependence, quasi-associated variables.