

Behavior of binned kernel density estimators for non-stationary random fields

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Abstract We investigate the asymptotic behavior of binned kernel density estimators for dependent and locally non-stationary random fields *converging* to stationary random fields. We focus on the study of the bias and the asymptotic normality of the estimators. A simulation experiment conducted shows that both the kernel density estimator and the binned kernel density estimator have the same behavior and estimate accurately the true density when the number of fields increases.