JOINT ASYMPTOTIC NORMALITY OF KERNEL TYPE DENSITY ESTIMATOR FOR SPATIAL OBSERVATIONS

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ABSTRACT

The Central Limit Theorem is considered for m-dependent random fields. The random field is observed in a sequence of irregular domains. The sequence of domains is increasing and at the same time the locations of the observations become more and more dense in the domains. The Central Limit Theorem is applied to prove asymptotic normality of kernel type density estimators. It turns out that the covariance structure of the limiting normal distribution can be a combination of those of the continuous parametric and the discrete parametric results. Numerical evidence is presented.

References

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