On the Asymptotic Distributions of Mean, Autocovariance, Autocorrelation, Crosscovariance and Impulse Response Estimators of a Stationary Multidimensional Random Field

Author: **ByoungSeon Choi**

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Abstract:

Asymptotic properties of mean, autocovariance, autocorrelation, crosscovariance and impulse response estimators of a stationary M-dimensional (M-D) random field are studied. It is shown that only unbiased-type estimators of autocovariances, autocorrelations, crosscovariances and impulse responses have the asymptotic distributions when $M \geq 2$. Moreover, the asymptotic distributions of mean, autocovariance, autocorrelation, crosscovariance and impulse response estimators are presented.