Approximate asymptotic variance-covariance matrix for the whittle estimators of GAR(1) parameters

Abstract

Generalized Autoregressive (GAR) processes have been considered to model some features in time series. The Whittle's estimates have been investigated for the GAR(1) process by a simulation study by Shitan and Peiris (2008). This article derives approximate theoretical expressions for the enteries of the asymptotic variance-covariance matrix for those estimates of GAR(1) parameters. These results are supported by a simulation study.

Keyword: Asymptotic; Covariance; Generalized Autoregression; Spectral density; Time series; Variance; Whittle's estimation.