

On Residual Analysis for Time Series Models.

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Abstract: Residuals are frequently used as a diagnostic tool for verification that a time series model fits to data. In the cases when the series is nonnormal and/or the model is nonlinear, the squared residuals and squared values of the series are taken into account. In our paper asymptotic formulas for the mean value and variance of the corresponding sample correlation functions are calculated. Small sample properties are investigated in a simulation study. The results can be used for testing linearity and normality of an autoregressive time series.

Keywords:

AMS Subject Classification: