Testing for a difference between conditional variance functions of nonlinear time series

by

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Abstract: In this report, the problem of testing for a difference between conditional variance functions (or volatilites) of two independent nonlinear time series is investigated by means of an extensive simulation study. Empirical results on the properties of the test proposed confirm the test's validity, at least for some types of heteroscedasticity as contrasted with homoscedastic errors as well as for some types of differences in heteroscedasticity. Moreover, interesting properties of several estimators of conditional mean, variance and fourth moment functions are empirically found too.

Keywords: Nonparametric autoregression, nonlinear time series, conditional variance, volatility, homogeneity test for conditional variances.