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Testing for the equality of two autoregressive functions using quasi-residuals

Friday, Feb 24, 11A.M. – 12 P.M. SPHIS Room 103

Abstract:

It discusses the problem of testing the equality of two nonparametric autoregressive functions against one-sided alternatives. The heteroscedastic errors and stationary densities of the two independent strong mixing strictly stationary time series can be possibly different. The paper adapts the idea of using sum of quasi-residuals to construct the test and derives its asymptotic null distributions. The paper also shows that the test is consistent for general alternatives and obtains its limiting distributions under a sequence of local alternatives. Then a Monte Carlo simulation is conducted to study the finite sample level and power behavior of these tests at some alternatives. We also compare the test to an existing lag matched test theoretically and by Monte Carlo experiments.