

COLLOQUIUM

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A Two-Sample Test for Comparison of Long Memory Parameters

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A405 Wells Hall
10:20 a.m. - 11:10 a.m.
Refreshments: 10:00 a.m.

Abstract

We construct a two-sample test for comparison of long memory parameters based on ratios of two rescaled variance (V/S) statistics studied in [Giraitis L., Leipus, R., Philippe, A., 2006. A test for stationarity versus trends and unit roots for a wide class of dependent errors. *Econometric Theory* 21 [989–1029]. The two samples have the same length and can be mutually independent or dependent. In the latter case, the test statistic is modified to make it asymptotically free of the long-run correlation coefficient between the samples. To diminish the sensitivity of the test on the choice of the bandwidth parameter, an adaptive formula for the bandwidth parameter is derived using the asymptotic expansion in [Abadir, K., Distaso, W., Giraitis, L., 2009. Two estimators of the long-run variance: Beyond short memory. *Journal of Econometrics* 150, 56–70]. A simulation study shows that the above choice of bandwidth leads to a good size of our comparison test for most values of fractional and ARMA parameters of the simulated series. The talk is based on joint work with Frédéric Lavancier and Anne Philippe (Nantes University).

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