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Testing for changes in the covariance structure of linear processes

We consider several procedures to detect changes in the mean or the covariance structure of a linear process. The tests are based on the weighted CUSUM process. The limit distributions of the test statistics are derived under the no change null hypothesis. We develop new strong and weak approximations for the sample mean as well as the sample correlations of linear processes. A small Monte Carlo simulation illustrates the applicability of our results.

This presentation is based partly on joint work with István Berkes and Lajos Horváth.