Sequential Monitoring for Change in Scale

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Abstract: We propose a sequential monitoring scheme for detecting a change in scale. We consider a stable historical period of length m. The goal is to propose a test with asymptotically small probability of false alarm and power 1 as the length of the historical period tends to infinity. The asymptotic distribution under the null hypothesis and consistency under the alternative hypothesis is derived. A small simulation study illustrates the finite sample performance of the monitoring scheme.

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