Wavelet Analysis of long-memory Processes

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Abstract

Given discrete measurements from a long-memory process, a wavelet transform leads to a set of wavelet coefficients. This representation is particularly appealing given the de-correlation property of the wavelet transforms. The statistical properties of the coefficients depend on the process underlying the data and a Bayesian approach gives a natural way to include information about the process itself. We use Markov chain Monte Carlo methods to derive estimates of the characteristic parameters of the process. Performances are evaluated on simulated data.

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