A Nonparametric Approach for the Long Memory Parameter

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Abstract
In financial and scientific applications, many time series are found to have the long memory persistence in the autocorrelation structure. If traditional methods are used on these series, valuable information is lost. Haslett and Raftery (1989) proposed a method to estimate the long memory parameter. We are proposing a new structure to estimate this parameter, which is based on nonparametric methods. We will demonstrate the new estimate's efficiency via a simulation study. Also, we will test the new method on a real data set.

References

Haslett, J., and Raftery, A.E. (1989) Space-time modeling with long-memory dependence: Assessing Ireland's wind power resource. Invited paper with discussion. *Journal of Applied Statistics*, **38**, 1 - 50.