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## Positive and negative local trend association patterns in analysis of associations between time series

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### Abstract

The paper introduces new time series shape association measures based on Euclidean distance. The method of analysis of associations between time series based on separate analysis of positively and negatively associated local trends is discussed. The examples of application of the proposed measures and methods to analysis of associations between historical prices of securities obtained from Google Finance are considered. An example of time series with inverse associations between them is discussed. © 2014 Springer International Publishing.

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### Keywords

Google Finance, hierarchical clustering, local trend associations, moving approximation transform, Time series shape association measure