

Component extraction analysis of multivariate time series

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Abstract

A method for modelling several observed parallel time series is proposed. The method involves seeking possible common underlying pure AR and MA components in the series. The common components are forced to be mutually uncorrelated so that univariate time series modelling and forecasting techniques can be applied. The proposed method is shown to be a useful addition to the time series analyst's toolkit, if common sources of variation in multivariate data need to be quickly identified.