Multiscale joint permutation entropy for complex time series

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Highlights

We propose MJPE method to study the synchronism between two time series.

We apply MJPE method to the simulated time series to test the validity.

The results show the necessity of multiscale and prove the effectiveness of MJPE.

MJPE method is employed to the financial and traffic time series.

MJPE results present the synchronisms from multiscale view successfully.