



SPECIAL SESSION PROPOSAL

The special session proposal is considered in International work-conference on Time Series (ITISE 2015).

TITLE OF THE PROPOSED SPECIAL SESSION

Analysis of irregularly sampled time series: techniques, algorithms and case studies.

MOTIVATION AND OBJECTIVES FOR THE SESSION.

Unevenly spaced time series are very common in many scientific disciplines and industry applications. Missing data, random sampling, gapped data, and incomplete sequences, among other causes, give origin to irregular time series. The common approach to deal with these sequences has been interpolation in order to have an evenly sampled sequence and then to apply any of the many methods that have been developed for regularly sampled time series. However when the spacing between observations is highly irregular, interpolation introduces unwanted biases. Thus, it is desirable to have direct methods that can deal with irregularly sampled time series.

This session welcomes contributions on this problematic: quantification of sampling irregularity in time series, advanced interpolation techniques and new techniques of analysis that can be applied directly to uneven time series.

The main objective of this session is the presentation of methodologies and cases studies dealing with the analysis of time series with irregular sampling. The contributions can be on any area of time series analysis. Among others, areas of interest are: event analysis, trend and seasonality estimation of uneven time series, smoothing, correlation, cross-correlation and spectral analysis of irregular time series; non-parametric and parametric methods, non-linear analysis; bootstrap, neural networks and other soft-computing techniques for irregular time series; expectation-maximization and maximum entropy algorithms and any other technique that deals with uneven time series analysis.



New theoretical developments, new algorithms implementing known methodologies, new strategies for dealing with uneven time series and case studies of time series analysis are appropriate for this special session.

SHORT BIOGRAPHY OF THE ORGANIZER: COMPLETE ADDRESS AND ADDITIONAL DATA FOR CONTACT.

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