



Mathematical Problems in Engineering

Special Issue on

Advanced Time Series Forecasting Methods

CALL FOR PAPERS

A lot of researchers have been studying time series forecasting for approximately one century in order to get better forecasts for the future. To achieve best forecast accuracy level, various time series forecasting approaches have been proposed in the literature. After 1980s, more sophisticated algorithms could be improved since properties of computers were enhanced. Therefore, new time series forecasting approaches such as artificial neural networks, fuzzy regression, fuzzy inference systems, and fuzzy time series could be proposed. In the applications, these approaches have proved their success in forecasting real life time series. In addition, hybrid forecasting methods which combine these new approaches have also been improved to obtain more accurate forecasts. In recent years, these advanced time series forecasting methods have been used to forecast real life time series and satisfactory results have also been obtained. The aim of this special issue is to collect new papers about advanced forecasting methods and canalizing new forecast researchers to the advanced forecasting methods. We are inviting original high-quality research and review papers on topics of advanced time series forecasting methods.

Potential topics include, but are not limited to:

- ▶ Forecasting methods which are using fuzzy set theory: fuzzy inference systems, fuzzy regression, fuzzy time series methods, and fuzzy function methods
- ▶ Forecasting methods which are based on artificial neural networks
- ▶ Hybrid forecasting methods in which fuzzy, probabilistic, and neural network methods are used
- ▶ Forecasting combination methods
- ▶ Probabilistic forecasting methods: regression methods, exponential smoothing methods, ARIMA, ARFIMA, TAR, SETAR, ARCH, and GARCH
- ▶ Robust forecasting methods: robust fuzzy methods and robust neural network methods
- ▶ Advanced forecasting applications in different disciplines such as economy and engineering
- ▶ Survey and literature review papers about forecasting methods
- ▶ Forecasting methods based on artificial intelligence optimization techniques

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