

Call for Papers

Special Issue on

Online Forecasting and Proactive Analytics in the Big Data Era

Journal:
Big Data Research



Key Dates

Submission:
15 June 2016

Notification:
15 September 2016

Revisions:
15 October 2016

Final decision:
1 November 2016

Guest Editors

[Alexander Artikis](#)

University of Piraeus,
Greece
NCSR Demokritos, Greece

[Themis Palpanas](#)

Paris Descartes University,
France

[Peter Pietzuch](#)

Imperial College London, UK

[Matthias Weidlich](#),

Humboldt-Universität zu
Berlin, Germany

Submission

<http://www.journals.elsevier.com/big-data-research/>

Rapid social, economic and political changes are making organizations shift their thinking from reactive to proactive in order to forecast opportunities and threats that could affect their business. Eliminating or mitigating an anticipated problem, or capitalizing on a forecast opportunity, can substantially improve our quality of life, and prevent environmental and economic damage. Changing traffic light policies and speed limits to avoid traffic congestions, for example, can reduce carbon emissions, optimize public transportation and increase commuter satisfaction. Similarly, adding credit cards to watch-lists as a result of forecasting fraud can reduce the cost inflicted payment processing companies and merchants, and consequently lower credit card costs.

Unlike traditional real-time analytics, that refers to the just-in-time processing of recent data, providing the opportunity to additionally implement forecasting supports proactive decision-making. To forecast problems and opportunities that may actually take place in the near future, high velocity data streams from heterogeneous and distributed sources need to be correlated in real-time with high volume historical data. Moreover, forecasting techniques must be resilient to the lack of veracity of the streaming as well as the historical data.

We invite quality submissions focusing on all aspects of forecasting using Big Data. We welcome both theoretical contributions as well as papers describing interesting applications. Broad topics include:

- Complex event forecasting
- Optimisation techniques for forecasting using Big Data
- Forecasting under uncertainty
- Machine learning for model construction
- Scalability and high throughput issues in forecasting
- Distributed forecasting systems for handling Big Data
- Provenance in forecasting
- Benchmarks, performance evaluation, and testbeds
- Verification of forecasting models
- Visual analytics for forecasting and proactive decision-making
- Adaptive forecasting systems
- Big Data applications of forecasting systems, such as analytics for the Internet-of-Things (IoT), online web analytics, smart grid analytics, credit card fraud management, traffic forecasting, and fleet management.