

Journal of Systems and Software



Special Issue on Software Architectures and Systems for Real Time Data Stream Analytics

Topics of interest

Sensors are now being embedded into almost everything around us. Our surroundings are generating massive and potentially infinite sequences of data streams mainly sourced from non-stationary distributions in highly dynamic environments. Such streams of big data are produced by an increasing number of widely adopted systems including social media platforms, surveillance systems, sensor networks, telecommunication records, web logs, etc. Real-time data processing at massive scale is becoming more and more of a requirement for businesses. But information technology is challenged when called upon to decipher the complexity of these environments, discover knowledge in these streams of data and produce actionable intelligence. Stream Big Data has high volume and complex data types, but the true challenge lies in its high velocity characteristic, especially when concerning applications that require real-time data mining and machine learning.

This special issue will focus on this challenging area. Original and unpublished high-quality research results are solicited to explore various challenging topics, which include, but are not limited to:

- System architectures supporting large-scale data stream fusion
- Real world applications using streams of Big Data
- Novel Architectures for efficiently mining streams of Big Data
- Novel Algorithms for online machine learning and analytics
- Data Streams & Cloud Computing
- Storage systems for evolving, multilayer big graphs
- Time-series processing systems under real-time constraints
- Visualization of streaming big data
- Infrastructures supporting large-scale and real-time data analytics
- Cross-stream big data analytics for knowledge extraction
- M2M data exchange

- Low-power computing infrastructures tackling big data challenges
- Data stream management systems from IOT platforms

Submission Guidelines

Articles can either be submitted directly to the special issue, or be selected for the special issue from papers submitted to RTStreams 2015: The 1st IEEE International Workshop on Real Time Data Stream Analytics

(<https://research.comnet.aalto.fi/BDSE2015/rtstreams2015/>)

All submissions have to be prepared according to the Guide for Authors as published in the journal website at <http://ees.elsevier.com/jss/>. Authors should select “SI: STREAMS”, from the “Choose Article Type” pull-down menu during the submission process. All contributions must not have been previously published or be under consideration for publication elsewhere. A submission extended from a previous conference version has to contain at least 30% new material. Authors are requested to attach to the submitted paper their relevant, previously published articles and a summary document explaining the enhancements made in the journal version.

Submission Deadline: 30 September 2015

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