

Call For Papers

Special Issue on “Big Data in Ubiquitous Computing”

IEEE Transaction on Big Data

Scope and Aims

With the continuous expansion of ubiquitous sensors, devices, networks and Internet of Things, all kinds of data become widely available and large in amount. Generation of huge amounts of data, called big data, reflects the dynamics of physical world and can be the basis for ubiquitous intelligence. Big data in ubiquitous intelligence scenarios exhibit some specific characteristics, like multi-source, heterogeneous, large-scale, real-time streaming, continuous, ever-expanding and spatial-temporal. Traditional ubiquitous computing approaches or systems began to show their limitations. It is difficult to manage and utilize all kinds of big data to accelerate ubiquitous intelligence in real-world. We believe that we need a new way for ubiquitous intelligence and computing where big data is immensely involved, especially for the data trace collected from ambient sensors, wearable, social media and so on. Intensive research is required on the collaboration between big data and ubiquitous computing. This special issue, as a dedicated forum, aims for the scientific and industrial community to present their novel models, methodologies, techniques and solutions which can address theoretical and practical issues.

Topics of Interest

We invite authors from academia and industry to submit their original research as well as review articles to present latest progresses for current development or future goals in this field.

Topics of interest include, but are not limited to:

- Basic theory of big data and ubiquitous computing
- System architecture and infrastructure of big data and ubiquitous computing: including computing architecture, cloud computing technology and platform, edge computing technology and platform
- Big data acquisition and pre-processing in ubiquitous computing
- Storage management models, techniques and systems for big data in ubiquitous computing
- Methods and algorithms for ubiquitous intelligent and ubiquitous computing: including machine learning, data mining, social network analysis, web mining and retrieval, business intelligence, ranking and recommendation, ontology-based storage management and analytical mining of large-scale semantic data, virtualized analysis and computation, etc.
- Parallel computation models, frameworks and systems for big data: including models, frameworks and systems of MapReduce, stream computing, hybrid parallel computation and programming
- Privacy and security of big data and ubiquitous computing

- System solutions and tool platform for big data and ubiquitous computing
- Industrial Applications of Big data and ubiquitous computing

Special Issue Editors

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Important Dates

- Manuscript Submission Deadline (Extended): October 15th, 2017
- First Round Decisions: December 15th, 2017
- Revision Deadline if needed: January 30th, 2018
- Second Round Decisions: March 30th, 2018
- Final Manuscript: April 30th, 2018

Paper Submission Guidelines

This issue will contain papers directly submitted from the wider research community along with selected papers from the 14th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC 2017, <http://ieee-smartworld.org/2017/uic/>). Papers selected from UIC will be substantially extended with at least 30% difference from its conference version. All submissions will go through a two-round peer-review process by at least three international researchers.

Before submitting your manuscript, please ensure you have carefully read the Instructions for Authors for IEEE Transactions on Big Data (TBD). The complete manuscript should be submitted through TBDs submission system. To ensure that you submit to the correct special issue, please select "Special Issue on Big Data in Ubiquitous Computing" in the dropdown menu upon submission. In your cover letter, please also clearly mention the title of the SI.

The page limit is 14 double column pages including references and author biographies. For submissions from **conference paper extensions**, all of them must include a summary of differences and a copy of the previous paper(s) as supplemental material.

More Information

The main website of the special issue is at <http://userpages.umbc.edu/~jianwu/TBD-BDUC-2017/>. The Call For Paper (CFP) information can also be found from the IEEE Transaction on Big Data web site at https://www.computer.org/cms/Computer.org/transactions/cfps/cfp_tbdsi_bduc.pdf.