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IEEE Transactions on Network Science and Engineering

Special Issue on *Smart Systems and Intelligent Networking Powered with Big Data Analytics*

TOPIC SUMMARY:

Smart systems including Internet of Things (IoT) are emerged to address contemporary economic, societal, and environmental challenges, such as business and production automation, urban sustainability, climate change, healthcare, and globalization. They encompass different autonomous or collaborative systems with functions of sensing, actuation, and control for describing and analyzing a situation, and making decisions based on the available data in a predictive or adaptive manner. Intelligent networking enables these functions of smart systems by offering a global infrastructure for networked physical devices and everyday objects, which generate gigantic amount of data, or big data. In addition, big data analytics is also employed in analyzing the big data so as to enable the networking to be intelligent and allow smart systems to perform astute, autonomous or collaborative actions. Nevertheless, the efficient and effective big data management and knowledge discovery of large-scale smart systems, big data analytics for intelligent networking, and networking technologies for big data (e.g., collection, processing, analysis and visualization) need more explorations.

The topics of interest for this special issue include, but are not limited to:

- Algorithms, models, and architecture for big data analytics
- Knowledge acquisition and discovery from big data
- Machine learning and computational intelligence techniques for handling big data
- Resource management of big data in smart systems
- Big data security and privacy in smart systems
- Network architecture evolution with big data
- Adaptive protocol design and control based on big data analytics
- Big data assisted planning and design in smart systems
- Network automation with big data analytics
- Network management, measurement, and diagnostics using big data analytics
- Network service and quality management using big data analytics
- Big data with in-network computation
- Networking big data analysis
- Information-centric networking and software-defined network for big data
- Network function virtualization and network slicing for big data
- Edge, fog, and mobile edge computing for big data
- Blockchain with big data networking
- Distributed artificial intelligence with networking

IMPORTANT DATES:

- Manuscripts due: 12/01/2019

- Peer reviews to authors: 02/15/2020
- Revised manuscripts due: 04/1/2020
- Second-round reviews to authors: 05/31/2020
- Final accepted manuscript due: 6/30/2020

SUBMISSION GUIDELINES:

Prospective authors are invited to submit their manuscripts electronically, adhering to the *IEEE Transactions on Network Science and Engineering* guidelines (https://www.comsoc.org/publications/journals/ieee-tnse/ieee-transactions-network-science-and-engineering-information). Note that the page limit is the same as that of regular papers. Please submit your papers through the online system (https://mc.manuscriptcentral.com/tnse-cs) and be sure to select the special issue or special section name. Manuscripts should not be published or currently submitted for publication elsewhere. Please submit only full papers intended for review, not abstracts, to the ScholarOne portal. If requested, abstracts should be sent by e-mail to the Guest Editors directly.

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