IEEE Transactions on Industrial Informatics

CALL FOR PAPERS

for Special Section on

Integration of Big Data and Artificial Intelligence for Internet of Things

Theme: E Connecting various cyber, physical and social "things" (e.g., networks, sensors, people) to realize intelligent information transmission and processing, the Internet of Things (IoT) has been widely utilized in various fields (e.g., traffic management, health monitoring, smart home, smart grid). However, there are still some challenges, which hinder the large-scale application of IoT. Specifically, to begin with, the data in IoT is with a certain redundancy, while transmitting and processing these redundant data consume energy unnecessarily. Therefore, these redundant data should be compressed or removed. Furthermore, the unstructured data in IoT plays an important role for analyzing the user behaviors, while transmitting and processing these unstructured data consume substantial energy. Therefore, these unstructured data should be mined or restructured. In addition, the increasing number of users in IoT leads to the fast growing data in IoT, while the Quality of Service (QoS) of IoT should be maintained regardless of the number of IoT users. Therefore, the data transmission and processing in IoT should be performed in a more intelligent manner. All these observations indicate that the integration of big data and artificial intelligence for IoT is a good propellant for improve the data transmission and processing in IoT, since big data technology (e.g., data integration, data mining, data prediction) could effectively handle various data while artificial intelligence technology could further facilitate capturing and structuring big data. Therefore, this special section aims to solicit original papers with novel contributions on the integration of big data and artificial intelligence for advancing IoT. Novel applications by the integration of big data and artificial intelligence for IoT are particularly welcome.

This special section will focus on (but not limited to) the following topics:

1) Big data technology for intelligent monitoring in IoT.
2) Big data technology for intelligent face recognition in IoT.
3) Big data technology for intelligent manufacturing in IoT.
4) Big data technology for intelligent transport system in IoT.
5) Artificial intelligence technology for data integration in IoT.
6) Artificial intelligence technology for data mining in IoT.
7) Artificial intelligence technology for data prediction in IoT.
8) Artificial intelligence technology for data storage in IoT.
9) Integration of big data and artificial intelligence for reducing energy consumption in IoT.
10) Integration of big data and artificial intelligence for privacy protection in IoT.
11) Novel applications by the integration of big data and artificial intelligence for IoT

Manuscript Preparation and Submission

Follow the guidelines in "Information for Authors" in the IEEE Transaction on Industrial Informatics http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics . Please submit your manuscript in electronic form through Manuscript Central web site: https://mc.manuscriptcentral.com/tii . On the submitting page #1 in popup menu of manuscript type, select: SS on **Integration of Big Data and Artificial Intelligence for Internet of Things**

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Regular manuscript length is 8 pages.

Note: The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

Timetable: **Deadline for manuscript submissions** **June 30, 2019**
Expected publication date (tentative) **November 2019**

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