IEEE Transactions on Industrial Informatics
CALL FOR PAPERS
for Special Section on
"Fog Computing for Industrial Applications"

The Theme: De Due to the increased number of connected things in industrial applications, the growing volume and velocity of Internet of Things (IoT) data exchange urge for more and more communication resources, leading to the bottleneck in terms of data processing, data latency, and traffic overhead. Fog computing emerges, as an alternative for traditional cloud computing to support geographically distributed, latency sensitive, and QoS-aware IoT applications while reducing the burden of data centers in traditional cloud computing. In particular, fog computing with the features (e.g., low latency, location awareness, and capacity of processing large number of nodes with wireless access) to support heterogeneity and real-time applications is an attractive solution to delay- and resource-constraint large scale industrial applications. However, with the benefits of fog computing, the research challenges arise regarding fog computing for industrial applications. For instance, how to handle different protocols and data format from highly dissimilar data sources in fog layer? How to determine which data should be processed in cloud or be processed in fog layer? How to achieve real-time responses and simultaneous data collection from large heterogeneous sources in industrial applications?

Motivated by the above issues, this special section solicits original research and practical contributions which advance the use of fog computing in industries. Results obtained by simulations must be validated in bounds by experiments or analytical results. Surveys and state-of-the-art tutorials are also considered.

Topics include, but are not limited to, the following research topics and technologies:
- ➢ Architecture features and evolution for fog computing in industries
- ➢ Content and service distribution models for fog computing in industries
- ➢ Caching, replication and relaying models for fog computing in industries
- ➢ Real-time communication interfaces and protocols for fog computing in industries
- ➢ Energy aware load balancing and scheduling on servers for fog computing in industries
- ➢ Orchestration across computation, storage and communication resources for fog computing in industries
- ➢ Theoretical and experimental evaluation of information-centric networks for fog computing in industries
- ➢ Security and privacy challenges for fog computing in industries
- ➢ Testing and evaluation tools for fog computing in industries
- ➢ Fog computing for real-time monitoring in industries
- ➢ The future for fog computing in industries: challenges and open issues

Manuscript Preparation and Submission

Follow the guidelines in "Information for Authors" in the IEEE- IES website: **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 **Fog Computing for Industrial Applications**.

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, additional 4 pages may be allowed for a fee.

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** **Nov. 30, 2017 (Extended to Jan. 31, 2018)**
Expected publication date (tentative) **May 2018**

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