IEEE Transactions on Industrial Informatics

CALL FOR PAPERS

for Special Section on

"5G and Beyond Mobile Technologies and Applications for Industrial IoT"

The Theme: Following the tremendous success of 2G and 3G mobile networks and the fast growth of 4G, the next generation mobile networks (5G) was proposed aiming to provide infinite networking capability to mobile users. Differentiated from 4G, benefits offered by 5G is much more than the increased maximum throughput. It aims to involve and benefit from many current technical advances including Industrial Internet of Things (IIoT). As the IIoT integrates many heterogeneous networks, such as Wireless Sensor Networks (WSNs), Wireless Local Area Networks (WLANs), Mobile Communication Networks (3G/4G/LTE/5G), Wireless Mesh Networks (WMNs) and wearable health care systems, it is critical to design self-organizing and smart protocols for heterogeneous ad hoc networks in various IoT applications, such as cyber-physical systems, cloud computing for heterogeneous ad hoc networks, large-scale sensor networks, data acquisition from distributed smart devices, green communication and applications, environmental monitoring and control, etc. Moreover, based on the survey conducted by the World Health Organization, the world will lack 12.9 million health care workers by 2035. Hence, it is important to develop wearable health care systems to perform self-health monitoring. In general, wearable health care systems demands low power consumption and high measurement accuracy. Smart technologies including green electronics, green radios, fuzzy neural approaches and intelligent signal processing techniques play important roles for the developments of the wearable health care systems. This special issue aims at providing a forum to discuss the recent advances on 5G and beyond mobile technologies and applications for IIoT.

Topics include, but are not limited to, the following research topics and technologies:

- Architecture of IIoT in 5G networks
- Software defined solutions for IIoT
- Energy efficiency and energy harvesting in IIoT
- Terminal intelligence and light weight sensors
- Data collection, processing, aggregation, and communication
- Co-existence and device inter-operability of sensors with 5G networks
- Data processing and anomaly detection for IIoT networks
- Machine-type communications in IIoT5G systems
- Emerging IIoT applications in 5G networks
- Experimental results, prototypes and testbeds using sensors for 5G technologies

Papers discussing application areas and the resulting new developments at the 5G IIoT mobile technologies are especially welcome. All contributions must focus on the use of 5G IIoT mobile technology.

Manuscript Preparation and Submission

Follow the guidelines in "Information for Authors" in the IEEE Transaction on Industrial Informatics http://tii.ieee-ies.org/ Please submit your manuscript in electronic form through Manuscript Central web site: http://mc.manuscriptcentral.com/tii. On the submitting page #1 in popup menu of manuscript type, **select**: SS on 5G and Beyond Mobile Technologies and Applications for Industrial IoT

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Extended versions of papers previously published in conference proceedings may be eligible for consideration if conditions listed in http://tii.ieee-ies.org/o/PC.pdf are fulfilled. Before submitting manuscript check the review criteria (http://tii.ieee-ies.org/o/RC.pdf) and other information (http://tii.ieee-ies.org/o/DI.pdf)

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** **August 30, 2017**
Expected publication date (tentative) **June 2018**

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