

**CALL FOR PAPERS**  
**IEEE Internet of Things Journal Special Issue on**  
**5G and Beyond – Mobile Technologies and Applications for IoT**

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 Internet of Things (IoT). As the IoT 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 IoT.

Topics of interest in this special issue include, but are not limited to Topics of interest include, but are not limited to:

- Architecture of IoT in 5G networks
- Software defined solutions for IoT
- Energy efficiency and energy harvesting in IoT
- Cooperative and smart sensing techniques
- Channel characteristics and modeling with dense and sparsely populated sensors
- Terminal intelligence and light weight sensors
- Data collection, processing, aggregation, and communication
- Efficient resource allocation schemes, QoS, and QoE in IoT
- Co-existence and device inter-operability of sensors with 5G networks
- Integrated D2D communication techniques for 5G networks
- Self-organization and self-healing of IoT networks
- Data processing and anomaly detection for IoT networks
- Cross-layer design and optimization in IoT
- Relay, multi-hop, and cooperative communication in IoT
- Ubiquitous communication, routing protocols, and network selection in IoT
- Machine-type communications in 5G systems
- Emerging IoT applications in 5G networks
- Security issues and solutions for IoT in 5G networks
- Sensor deployment, placement, control and management issues
- Experimental results, prototypes and testbeds using sensors for 5G technologies

**Important Dates**

Submissions Deadline: **March 31, 2017**

Final Manuscript Due: July 15, 2017

Acceptance Notification: June 15, 2017

Publication Date: October 2017

**Submission**

All original manuscripts or revisions to the IEEE IoT Journal must be submitted electronically through IEEE Manuscript Central, <http://mc.manuscriptcentral.com/iot>. Author guidelines and submission information can be found at <http://iot.ieee.org/journal>. Each submitted manuscript will be sent to reviewers who will evaluate your work. The IEEE IoT Journal encourages authors to suggest potential reviewers as part of the submission process, which might help to expedite the review of the manuscript. Please suggest only those without

conflict of interest (e.g. who work at institutions other than your own and with whom you have no collaborative or other technical or family ties). Each submission must be classified by the author to select appropriate keywords of this Journal.

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