IEEE Global Communications Conference
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Accelerating the Digital Transformation through Smart Communications

IEEE GLOBECOM® 2022

CALL FOR PAPERS AND PROPOSALS

IoT and Sensor Networks Symposium

Symposium Co-Chairs

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Scope and Motivation

The Internet of Things (IoT) has emerged as a promising technology to revolutionize the way we live and interact with the surrounding environment. IoT produces and communicates massive amounts of data that needs to be filtered, analyzed, and processed. In industrial environments (i.e., Industry 4.0 and 5.0) as well as in smart cities, communication between connected devices requires high reliability, low latency, and sufficient scalability. Several technologies such as BLE, Zigbee, Wireless HART, IEEE Std 802.15.4 TSCH, 6TiSCH, LPWAN (LoRa, Sigfox, NB-IoT, LTE-M etc.), and RAW have been proposed to tackle these communication requirements. The 5G network provides not only increased data rates but also ultra-low data latency communication for critical IoT applications that require extreme reliability. 5G enables Machine Type Communication (MTC), which is used by mobile network operators, equipment vendors, MTC specialist companies, and research bodies. The high-traffic demand, low-latency, and deterministic delivery requirements stemming from IoT and machine-to-machine (M2M) communications can be met only with radical changes to current communication and networking architectures. Recently, Fog and Edge computing has been proposed to mitigate the heavy burden on the network due to the centralized processing and storing of the massive IoT data. Fog/Edge-enabled IoT architectures ensure closer processing in proximity to the things, which results in small, deterministic latency that enables real-time applications and enforced security.

Topics of Interest

The IoT and Sensor Networks Symposium at IEEE Globecom 2022 aims at a forum that brings together scientists, researchers, and leaders in their domain to present their cutting-edge innovations in all aspects of this field. The IoT and Sensor Networks Symposium seeks original contributions and unpublished pertaining to trends, issues, and challenges of the following topical areas, plus others that are not explicitly listed but are closely related:

- Blockchain technology for IoTs
- Medium Access Control

- Federated learning for IoT networks
- B5G networks and IoT
- IoT security, trust, and trustworthy
- Secure and privacy-preserving IoT communications
- IoT and personal data protection
- Artificial intelligence and IoT
- IoT large scale pilots and portability
- IoT interoperability and multi-platform integration
- SDN, NFV and IoT
- Intelligent sensor and actuator networks
- Emerging IoT protocols and standards
- Ultra-low power IoT technologies and embedded systems architectures
- Wearables, body sensor networks, smart portable edge devices
- Design space exploration techniques for IoT devices and systems
- Heterogeneous networks, Web of things, Web of everything
- Named data networking for IoT
- Internet of nano things
- IoT data management, mining and analytics
- Distributed IoT dtorage and management
- Routing and control protocols
- Resource management, resource allocation
- Mobility, Localization and Management Aspects
- Identity management and object recognition
- Localization technologies
- Edge computing, fog computing and IoT
- Fog/Edge caching techniques for IoT
- Machine to machine (M2M)/devices-to-devices communications and IoT
- Industrial IoT and factory of things and IoTs
- Emerging technologies for the industrial IoT
- Application of Fog/Edge computing to IoT: architectures and implementations
- Autonomic computing for IoTs
- Connected car, automotive, intelligent transport
- Cooperative computing for IoTs
- Cooperative IoT and sensor systems
- Design principles and best practices for IoT application development
- Dynamic scheduling, power control, interference management, and QoS
- Standards based IoT large scale pilots/demonstrators
- Interoperability methodologies for heterogeneous IoT
- IoT big data management and predictive analysis
- IoT for smart manufacturing (industry 5.0) and smart spaces
- IoT standards platforms interworking
- Horizontal application development for IoT
- IoT networks crowdsensing
- Mobility, localization and context-adaptive IoT

Important Dates

Paper Submission: 15 April 2022
Notification: 25 July 2022
Camera Ready and Registration: 1 September 2022

How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers are provided on the IEEE Globecom 2022 website: https://globecom2022.ieee-globecom.org/