

# IEEE GLOBAL COMMUNICATIONS CONFERENCE

8–12 December 2024  
Cape Town, South Africa

**Call For Papers**

[globecom2024.ieee-globecom.org](http://globecom2024.ieee-globecom.org)



## IoT and Sensor Networks

### SYMPOSIUM CHAIRS AND CO-CHAIRS

- Lin Cai, Illinois Institute of Technology, USA, [lincai@iit.edu](mailto:lincai@iit.edu)
- Rodolfo W. L. Coutinho, Concordia University, Canada, [coutinho@ece.concordia.ca](mailto:coutinho@ece.concordia.ca)
- Gang Yang, University of Electronic Science and Technology of China, China, [yanggang@uestc.edu.cn](mailto:yanggang@uestc.edu.cn)
- Noura Aljeri, Gulf University for Science and Technology, Kuwait, [aljeri.n@gust.edu.kw](mailto:aljeri.n@gust.edu.kw)

### 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 2024 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
- Federated learning for IoT networks
- B5G networks and IoT

- Passive/Ambient IoT technologies for B5G/6G
- 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
- Internet of Underwater Things
- IoT data management, mining and analytics
- Distributed IoT data storage and management
- Routing and control protocols for IoT and sensor networks
- Resource management, resource allocation for IoT and sensor networks
- Mobility, localization and context-adaptive IoT
- Medium Access Control for IoT and sensor networks
- Mobility, Localization and Management Aspects for IoT and sensor networks
- Identity management and object recognition for IoT and sensor networks
- Localization technologies for IoT and sensor networks
- 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 for IoT and sensor networks
- 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 for IoT and sensor networks
- 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

## **IMPORTANT DATES**

Deadline for paper submission: 1 April 2024

Date for notification: 1 August 2024

Deadline for final paper submission: 1 September 2024

## **SUBMISSION INSTRUCTIONS**

All papers for technical symposia should be submitted via EDAS through the following link:

<https://edas.info/N31420>