



Selected Areas in Communications Symposium Track on Internet of Things

SYMPOSIUM CO-CHAIRS:

Ridha SOUA, University of Luxembourg, Luxembourg
Pietro MANZONI, Universitat Politècnica de València, Spain

SCOPE AND MOTIVATION:

With the promise of revolutionizing the way we live, work and manufacture, it is no surprise why the Internet of Things (IoT) has picked up the momentum in both industry and academia. According to various studies, tens of billions of devices are expected to be connected to the internet by 2020. Thanks to the increased connectivity and the continued miniaturization of computers and smart devices, IoT will generate huge volumes of data that will have to be analyzed to uncover hidden patterns, correlations and other insights. Moreover, in the industrial environments (Industry 4.0) as well in smart spaces (building, houses, etc.) and connected cars communications will require higher reliability, lower latency and scalability. Several technologies such as BLE, Zigbee, WirelessHART, 6TiSCH, LPWAN (LoRa, Sigfox, etc.) have been proposed to tackle these requirements.

The forthcoming 5G networks promise not only increased data rates but also ultra-low data latency communication for critical IoT applications that require extreme reliability. 5G will enable Machine Type Communication (MTC) one of the most promising technologies for IoT applications which is gaining a tremendous interest among mobile network operators, equipment vendors, MTC specialist companies, and research bodies.

This anticipated high-traffic demands, low-latency and deterministic delivery requirements stemming from IoT and machine-to-machine (M2M) communications can be met only with radical changes in terms of architecture and communication solutions. Recently, Fog/Edge-to-thing continuum is 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.

IEEE Global Communications Conference

9-13 December 2019 • Big Island, Hawaii, USA

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CALL FOR PAPERS AND PROPOSALS

The aim of the Internet of Things Track is to provide a forum that brings together scientists and researchers to present their cutting-edge innovations in all aspects of the field.

This track solicits technical papers describing original, previously unpublished papers pertaining to trends, issues and challenges of the Internet of Things

MAIN TOPICS OF INTEREST:

We invite submissions on a wide range of research topics, spanning both theoretical and systems research, including results from industry and academic/industrial collaborations, related but not restricted to the following topics:

<ul style="list-style-type: none"> • IoT for smart manufacturing (industry 4.0) and smart spaces • IoT for the developing countries • IoT big data and predictive analysis • Innovative routing and scheduling protocols • New communications mediums for Low Power Wide Area Networks • Dynamic scheduling, power control, interference management, and QoS management in IoT networks • Software Defined Networking (SDN) and NFV for IoT • Mobility, Localization and context-adaptive Internet of Things • RFID sensing technology • Practical Perspectives on IoT in 5G Networks • Communications technologies: NB-IoT, LoRa, Sigfox, ... • Sensor Integration • Complex and Compound Sensors • Cooperative Sensor Systems • Ambient Intelligence • Smart Cities, Smart Home 	<ul style="list-style-type: none"> • Application of Fog/Edge computing to IoT: architectures and implementations • Fog/Edge Caching techniques for IoT • Massive MTC (mMTC) • Web of Things • Messaging Technologies for the Industrial IoT (Google QUIC, DDS, AMQP, MQTT, MQTT-SN, CoAP, etc) • Secure and privacy-preserving IoT communications • Blockchain technology for IoT • IoT standards platforms interworking • Experience and lessons learnt for standards based IoT large scale pilots/demonstrators • Interoperability methodologies for heterogeneous IoT • Autonomic Computing • Mobile platforms as sensors • Low Power Computing • Cooperative Computing • Horizontal application development for IoT • Design principals and best practices for IoT application development • Connected Car, Automotive, Intelligent Transport
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IMPORTANT DATES:

- **Paper submission:** April 15, 2019
- **Notification date:** July 15, 2019
- **Final paper due:** August 16, 2019

Submission link:

<https://edas.info/newPaper.php?c=25090&track=91881>