



**IEEE Global Communications  
Conference**  
**9-13 December 2018**  
**Abu Dhabi, UAE**  
**Gateway to a Connected World**



## **Call for Papers**

### **Selected Areas in Communications Symposium**

### **Track on Internet of Things**

#### **Track Chair:**

Latif Ladid, University of Luxembourg, Luxembourg

#### **Scope and Motivation:**

The Internet of Things (IoT) envisions thousands of constrained devices with sensing, actuating, processing, and communication capabilities able to observe the world with an unprecedented resolution. According to Cisco, more than 50 billion devices are expected to be connected to the internet by 2020 and 20 % of which are from the industry sector. These connected things will generate huge volume of data that need to be analyzed to gain insight behind this big IoT data. Moreover, in the industrial environments (industry 4.0) as well in smart spaces (building, houses, etc.) and connected cars communications often require high reliability, low latency and scalability. Several technologies such as BLE, Zigbee, WirelessHART, 6TiSCH, LPWAN (Lora, Sigfox, etc.) have been proposed to fit these requirements.

The forthcoming 5G networks is promising not only by increased data rates but also low-latency data communication for latency-critical IoT applications. 5G will enable massive IoT devices connected via a myriad of networks and critical machine type communications. While the massive IoT is more concerned about scalability deep coverage and energy efficiency, the latter requires ultra-low latency and extreme reliability. Recently, the fog-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-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.

#### **Main Topics of Interest:**

The aim of the IoT 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 This IoT track solicits technical papers describing original, previously unpublished papers pertaining to trends and issues and challenges of IoT. Topic calls for novel contributions, R&D results from industry and academic/industrial collaborations including, but not restricted to the following topics:



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| <ul style="list-style-type: none"><li>• IPv6 as an Enabler of the Internet of Things</li><li>• IPv6-based novel addressing schemes for IoT devices</li><li>• Deployment strategies in IoT: coverage and connectivity issues and challenges</li><li>• IoT for smart manufacturing (industry 4.0) and smart spaces</li><li>• IoT big data and predictive analysis</li><li>• Innovative routing and scheduling protocols</li><li>• New communications mediums for Low Power Wide Area Networks</li><li>• Dynamic scheduling, power control, interference management, and QoS management in IoT networks</li><li>• Software defined networking for IoT</li><li>• Mobility, Localization and context-adaptive Internet of Things</li><li>• Practical Perspectives on IoT in 5G Networks</li><li>• NB-IoT</li></ul> | <ul style="list-style-type: none"><li>• Application of SDN, NFV, and Fog computing to IoT: architectures and implementations</li><li>• Fog Caching techniques for IoT</li><li>• Massive MTC (mMTC)</li><li>• Web of Things</li><li>• Messaging Technologies for the Industrial IoT (DDS, AMQP, MQTT, MQTT-SN, CoAP, etc)</li><li>• Hybrid IoT-satellite networks</li><li>• Secure and privacy-preserving IoT communications</li><li>• Blockchain technology for IoT</li><li>• IoT standards platforms interworking</li><li>• Experience and lessons learnt for standards based IoT large scale pilots/demonstrators</li><li>• Interoperability methodologies for heterogeneous IoT</li></ul> |
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