Workshop on Wireless Access Technologies and Architectures for Internet of Things (IoT) Applications

1. Call for papers

The Internet-of-Things (IoT) will revolutionize industry and our lives. Future IoT networks will need to provide low latency and high reliability communications for multiple vertical industries including transport, health, manufacturing, agriculture and energy. Wireless technologies will be the most cost-effective and scalable solution for enabling the intensive acquisition of information from massive numbers of fixed and mobile IoT devices. However, many open questions still need to be addressed to overcome fundamental constraints of radio spectrum, power, and transmission distance to support wide area coverage and ultra-reliable low latency communications for IoT devices. Furthermore, it is expected that each vertical industry will need to share a common IoT platform and there are massive challenges in unifying these networks. These include massive computational complexity and transmission latency in processing massive amounts of information and managing massive number of terminals from multiple vertical industries, which are not adequately addressed in the latest 5G wireless network standard. As such, there is a need to redesign wireless access technologies and architectures with reconfigurable software-defined wireless networks to facilitate a scalable and flexible common IoT platform, feasible due to recent advances in Software Defined Radio (SDR) and Networking (SDN) as well as Network Function Virtualisation (NFV).

This workshop is designed to bring together academic and industrial researchers in an effort to identify and discuss the major technical challenges and recent breakthroughs related to wireless IoT networks. Topics of interest include but are not limited to the following:

- Multi-tenant Multi-service radio access networks for IoT devices
- Software Defined Networking for IoT networks
- Software Defined Radio for IoT communications
- IoT applications for Smart City and Smart Industry
- Security aspect in IoT cellular networks
- Dynamic spectrum and massive access management
- Cognitive radio technology
- IoT network economics and pricing
- IoT architectures, protocols, and resource allocation algorithms for multiple vertical industries
- Wireless network domain technologies for multiple vertical industries (LTE/LTE-A,WSN, VANET, RFID, WiFi, Zigbee)
- Wireless network architectures for multiple vertical IoT industries (Virtualisation, Cloud Radio Access Networks)
- IoT devices prototyping activities and field trials
- Performance evaluation of wireless IoT technologies
- IoT network test-bed development
- Software-based reconfigurable wireless networks

The workshop will also feature a keynote speech as well as a panel discussion given by world leading researchers in the field.

2. Organizing Committee

Wibowo Hardjawana | University of Sydney, Australia | wibowo.hardjawana@sydney.edu.au

Phee Lep Yeoh | University of Sydney, Australia | phee.yeoh@sydney.edu.au

3. Technical Program Committee

Dong Yuan | University of Sydney, Australia | dong.yuan@sydney.edu.au

Wei Bao | University of Sydney, Australia | wei.bao@sydney.edu.au

4. Paper submission guidelines

All final submissions should be written in English with a maximum paper length of six (6) printed pages. See conference web page for instructions.

5. Important dates

Paper submission deadline: October 6, 2017

Paper Acceptance Notification: November 15, 2017

Camera-Ready Submission: December 15, 2017