**International Workshop on**

## Internet of Things (IoT): Technology and Applications

**19 November 2018**

S45-12-Zain E-Learning Center

## Abstract

An understanding of the way the IoT systems work is necessary for end users to enable them to maximise their benefits from IoT. This workshop on IoT serves as a boot strap to initiate end users into the IoT ecosystem and appreciate its utility, characteristics as well as risks. The workshops are targeted towards industry professionals, faculty, students, and enthusiasts. The workshop content is designed with the current market trends and provides information on use-case scenarios and corresponding solutions. The workshop content provides sufficient awareness to the participants to be able to engage in discussions for implementation of functional IoT solutions.

The workshop addresses the generic approach to building an IoT system. It is intended to help users to understand solutions for specific problem areas in smart home, industrial automation, transport and mobility, healthcare and in general, smart city initiatives. The workshop will include a series of talks and a couple of Q&A sessions.

## Workshop Schedule

| Time | Session | Presenter |
|------|---------|-----------|
| 0945 - 1000 | Introduction to the Workshop | PJ |
| 1000 - 1030 | The IoT Landscape | PJ |
| 1030 - 1100 | Internetworking in IoT | GG |
| 1100 - 1125 | IoT Data – Generation, Exchange, Validity, Privacy | GG |
| 1125 - 1150 | Prayer | |
| 1150 - 1200 | Q&A | PJ, GG, CB |
| 1200 – 1245 | Innovation and IoT | PJ |
| 1245 – 1330 | Real-life applications of IoT (Agriculture, Health, etc.) | PJ |
| 1330 - 1420 | Lunch | |
| 1420 - 1450 | Industrial IoT (IIoT) | GG |
| 1450 - 1530 | IoT Security | GG |
| 1530 - 1600 | Discussion Panel, Q&A, Close | PJ, GG, CB |

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### DR PRINCY JOHNSON

Dr Princy Johnson is a Senior Lecturer in the School of Engineering at Liverpool John Moores University. She received her PhD from King's College London. Her research interests include energy-efficient protocols for wireless sensor and mobile networks, Optimisation tools for Data Analysis, intelligent algorithms for personalised interface for healthcare and transport applications, and leadership skills for engineers. Dr Johnson is a registered PRINCE2 ® practitioner and an avid collaborator. She has put together a cohesive collaborative team from across Europe and coordinated the consortium through research activities and various UK and EU funding calls.

She is an executive committee member of Rail Research UK Association (RRUKA) since September 2011. She was the Lead co-chair of the workshop on PERSONALIZED MOBILE APPLICATIONS FOR SMART CITIES AND SMART CITIZENS (PMA 2017) at the 28th Annual IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'17), Oct 2017. She jointly organised and co-chaired a 2-day IEEE workshop on IoT: Sensor Technologies, Applications and Entrepreneurship with Sensor City, Liverpool and IEEE WIE UK&I chapter in October 2017).

https://www.ljmu.ac.uk/about-us/staff-profiles/faculty-of-engineering-and-technology/department-of-electronics-and-electrical-engineering/princy-johnson

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### CHITRA BALAKRISHNA

Chitra Balakrishna, Ph.D. MBCS, FHEA is a Senior Lecturer and Programme leader for cyber security at Open University, Milton Keynes, UK. Previously she held senior academic positions at Edge Hill University and University of South Wales. She is an academic, author, futuristic technology and open source enthusiast. She has over 18 years of experience spanning across academia and industry in the areas of Data Networking, Mobile Communications, Technologies and Applications. She set up an open source next-generation networking (NGN) lab in collaboration with industrial partners such as Orange and France Telecom, while at University of South Wales.

She has several academic publications and a book by John Wiley Publications to her credit. She has successfully led a HEA funded project on cyber-security, EPSRC pilot project on IoT security and British Council funded UK-Gulf partnership funds at Edge Hill University. Additionally, she has been a co-investigator in European projects and ERDF funded projects in the areas addressing mobile and wireless sensor technologies. She has founded and chaired successful IEEE sponsored workshop on Smart cities since 2009. Her current research interests are in converged networks and services, smart cities, eHealth and related cyber security.

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### GOPI GARGE

Gopi Garge is the Founder-Director of SmartLancs Ltd, UK, a consulting start-up that focuses on technology and solutions for Smart Cities, eHealth and related areas such as interconnectivity, interoperability and security. He is also the founder-Director of Ignatia Sensors Ltd., UK a technology company focusing on solutions for assisted living. He jointly organised and co-chaired a successful 2-day IEEE workshop on IoT: Sensor Technologies, Applications and Entrepreneurship with Sensor City, Liverpool and IEEE WIE UK&I chapter in October 2017).

Prior to this, he headed the Network Services group at the Indian Institute of Science (IISc) in Bangalore, India. He has consulted for several industries, while at IISc. His interests include IoT systems and safety-criticality, Data validity and sanitisation (Big Data), and Edge Computing.

He is a Fellow of the IPv6 Forum and serves as a member of the IEEE P1931.1 working group.