2nd International Workshop on **De**pendable **W**ireless **Com**munications (DEWCOM)

9:00 – 9:10

Opening

9:10 – 10:00

Keynote: Look Ma No Batteries! Batteryless Wireless System for Identification and Communication
Shaiful J. Hashim, Universiti Putra Malaysia (UPM)

Abstract—For identification or communications, most conventional wireless systems require some sort of power supply, either from the electrical grid (fixed devices) or from battery (remote or mobile devices). There is a new and very popular wireless charging protocol—Qi—for wirelessly charging mobile devices within touching distance using inductive coupling (near-field).

This trend opens the opportunity for remotely charging the mobile devices from a distance (far-field). Which begs the question: can we have batteryless systems that function based solely on on-demand energy harvesting?

This talk will explore the state-of-the-art and feasibility of batteryless wireless systems for identification and communication. The aim is to design wireless systems that are more environmentally-friendly by not using any battery. Furthermore, it is more dependable in the longer term compared to battery-based systems that have comparatively shorter operation duration due to battery charging, depletion and expiration replacement cycles.

Biography—Shaiful J. Hashim is currently Associate Professor in the Department of Computer and Communication Systems Engineering, Faculty of Engineering, Universiti Putra Malaysia (UPM). He received his Ph.D from Cardiff University, UK (2011), M.Sc from National University of Malaysia (2003) and B.Eng from University of Birmingham, UK (1998) in the field of Electrical and Electronics Engineering. He is a winner of the prestigious IEEE MTT-11 2008 Creativity and Originality in Microwave Measurements Competition. His research interests are cloud computing, Internet of Things (IoT), network security and non-linear wireless measurement system. He has contributed to more than one hundred technical and research publications.

10:00 – 10:30

Session I
Chair: Joaquim Ferreira, University of Aveiro

A QoS-Aware Multi-Tiered Body Area Network Communication Scheme for Energy Efficient Transmission
Emeka E. Egbogah, General Dynamics Mission Systems

10:30 – 11:00

Coffee Break

11:00 – 13:00

Session II

Chair: Emeka E. Egbogah, General Dynamics Mission Systems

A Semi-Supervised Learning Approach to IEEE 802.11 Network Anomaly Detection
Jing Ran, Yidong Ji, Beijing University of Posts and Telecommunications, P. R. China; TangBihua, Beijing University of Posts and Telecommunications

Enabling Proof-of-Work for Low-End IoT Devices
Paulo C. Bartolomeu, Emanuel Vieira, Instituto de Telecomunicações / University of Aveiro; Joaquim Ferreira, Instituto de Telecomunicações / ESTGA

Overhead of V2X secured messages: an analysis
João Rufino, Instituto de Telecomunicações - Aveiro; Luis Silva, Bruno Fernandes, Instituto de Telecomunicações; João Almeida, Instituto de Telecomunicações - Aveiro; Joaquim Ferreira, Instituto de Telecomunicações/ESTGA

Power Control and Mode Selection Algorithm for D2D Communications
Praveen Pawar, Aditya Trivedi, ABV-IIITM Gwalior