

Workshop Agenda

From M2M Communications to Internet of Things

In conjunction with the *IEEE 27th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC)*

Sunday, September 4th, 2016, 9:00-18:00

[Valencia Conference Centre, Valencia, Spain](#)

(In collaboration with the *EIT DIGITAL* Project: "[HII - ACTIVE: High Impact Initiative - Advanced Connectivity platform for VERTICAL segments](#)")

9:00 9:20 Welcome and Introduction
Sassan Iraj

9:20 10:40 Paper Presentations #1: Local and Body Area Communications for IoT
Chair: Sassan Iraj

A Novel Technique for ZigBee Coordinator Failure Recovery and Its Impact on Timing Synchronization

Davide Scazzoli, Atul Kumar, Navuday Sharma, Maurizio Magarini and Giacomo Verticale (Politecnico di Milano, Italy)

An Analytical Model of the Effective Delay Performance for Bluetooth Low Energy

Raúl Rondón (Politecnico di Torino; ABB Corporate Research Västerås, Sweden); Krister Landernäs (ABB Corporate Research Västerås, Sweden); Mikael Gidlund (Mid Sweden University; ABB Corporate Research, Sweden)

Comparison of 802.11ah and BLE for a Home Automation Use Case

Luis Felipe Del Carpio Vega (Ericsson Research, Finland); Piergiuseppe Di Marco (Ericsson, Sweden); Per Skillermark (Ericsson Research, Sweden); Roman Chirikov (Ericsson AB, Sweden); Karin Lagergren (Ericsson, Sweden); Parth Amin (Ericsson Research, Finland)

Measurement and Characterization on a Human Body Communication Channel
Yan Zhang, Zunwen He and Yang Liu (Beijing Institute of Technology, P.R. China); Luis Alberto Lago Enamorado (Beijing Institute of Technology, China); Xiang Chen (Sun Yat-sen University, P.R. China)

10:40 11:10 Networking and Coffee Break

11:10 11:50 Keynote #1
Dr. Magnus Frodigh (Ericsson, Sweden)

11:50 12:50 Paper Presentations #2: Low-Power Wide-Area Communications for IoT
Chair: David Gonzalez Gonzalez

NB-IoT Deployment Study for Low Power Wide Area Cellular IoT
Nitin Mangalvedhe, Rapeepat Ratasuk and Amitava Ghosh (Nokia Bell Labs, USA)

Trusted D2D-based Data Uploading in In-band Narrowband-IoT with Social Awareness
Leonardo Militano (Mediterranea University of Reggio Calabria, Italy); Antonino Orsino and Giuseppe Araniti (University Mediterranea of Reggio Calabria, Italy); Michele Nitti and Luigi Atzori (University of Cagliari, Italy); Antonio Iera (University Mediterranea of Reggio Calabria, Italy)

Measurements, Performance and Analysis of LoRa FABIAN, a real-world implementation of LPWAN
Tara Petric, Mathieu Goessens, Loutfi Nuaymi and Laurent Toutain (Telecom Bretagne, France); Alexander Pelov (Institut Mines-Telecom / Telecom Bretagne, France)

12:50 14:10 Lunch break

14:10 14:50 Keynote #2
Dr. Preben Mogensen (Nokia Bell Labs/Aalborg University, Denmark)

14:50 15:50 Paper Presentations #3: Ultra-reliability and Security Aspects for IoT
Chair: Andres Laya

Analysis of Transmission Modes for Ultra-reliable Communications
Hamidreza Shariatmadari and Ruifeng Duan (Aalto University, Finland); Zexian Li (Nokia Bell Labs, Finland); Sassan Iraji (Aalto University, Finland); Mikko A. Uusitalo (Nokia Bell Labs, Finland); Riku Jäntti (Aalto University, Finland)

A Secure Scheme for Group Communication of Wireless IoT Devices

Bashar Ahmed Alohalı (Liverpool John Moores University, United Kingdom); Vassilios G. Vassilakis (University of West London, United Kingdom)

Ultra-Reliable Communication in a Factory Environment for 5G Wireless Networks: Link Level and Deployment Study

Bikramjit Singh (Aalto University, Finland); Zexian Li (Nokia Bell Labs, Finland); Olav Tirkkonen (Aalto University, Finland); Mikko A. Uusitalo (Nokia Bell Labs, Finland); Preben Mogensen (Nokia Bell Labs and Aalborg University, Denmark)

15:50 16:20 Networking and Coffee Break

16:20 18:00 Paper Presentations #4: Energy, Architecture and Technoeconomical Aspects for IoT
Chair: Rapeepat Ratasuk

Feasibility and Fundamental Limits of Energy-Harvesting Based M2M Communications
Jukka Rinne, Jari Keskinen, Paul Berger, Donald Lupo and Mikko Valkama (Tampere University of Technology, Finland)

Performance analysis of ambient backscattering for green Internet of Things
Donatella Darsena (University of Napoli Parthenope, Italy); Giacinto Gelli (University of Napoli - Federico II, Italy); Francesco Verde (University of Napoli Federico II; National Inter-University Consortium for Telecommunications, Italy)

RELOAD/CoAP Architecture with Resource Aggregation/Disaggregation Service
Luís Rodrigues and Joel Guerreiro (Universidade do Algarve, Portugal); Noelia Correia (University of Algarve, Portugal)

Theoretical Analysis of UNB-based IoT Networks with Path Loss and Random Spectrum Access
Yuqi Mo (CITI of INSA-Lyon; SIGFOX, France); Claire Goursaud and Jean-Marie Gorce (INSA-Lyon, France)

Value Creation and Coopetition in M2M Ecosystem - The Case of Smart City
Amirhossein Ghanbari, Andres Laya and Jan Markendahl (Royal Institute of Technology, Sweden)

18:00 Closing Remarks