



University of Pavia

Ph.D. School of Electrical and Electronics Engineering and Computer Science

SEMINAR

Wireless Sensing and IoT Integration for Energy Consumption Reduction

Sandra Dudley

Associate Professor, London South Bank University

Hafeez Siddiqui

Doctor of Philosophy (PhD), London South Bank University

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Abstract: *Long-term energy consumption reduction can be achieved through sensible cooperation between end-users and technological advancements. Monitoring energy use within buildings requires clear and reliable methods with outputs that are meaningful and helpful. End users play a pivotal role in this as energy use revolves around their presence and comfort. Hence, with changing lifestyles and working patterns, energy consumption reduction can be aided by new digital innovations. Consumers appreciate that technological innovations can increase their quality of life. However, a lasting bond between the two can only occur when users have confidence in the technology around them. This is more likely to happen when users and technologists work collectively in the system design process. Systems that take insights from users' behaviour analysis, metering schemes, wireless sensors and embedded software to both interactively and automatically manage users' energy consumption within indoor environments. To achieve this, technologists must adopt a multidisciplinary approach where knowledge from psychology, social and economic research, wireless communications and computer science unite to provide a viable solution that is beneficial to all the stakeholders along the energy/consumer supply chain.*

Bio: **Dr. Sandra Dudley** is an Associate Professor of Telecommunications and Director of Research at London South Bank University, London, UK. Sandra received her PhD in Physics from the University of Essex, UK. Her interest in low power and remote sensing schemes has led to adaptive wireless systems research where she investigates areas ranging from antenna design, wireless sensor networks, transmission channels to radio propagation modelling and experimentation for both energy and health applications. She has worked on a number of research grants with applications in remote user monitoring and data processing. Currently she is working on wireless sensor/actuator schemes and their deployment in cloud platforms for IoT applications.

Dr. Hafeez Siddiqui received his PhD in Electronic Engineering from London South Bank University in February 2016. He received the BSc. Degree in Mathematics from Islamia University Bahawalpur (IUB), Pakistan in 1998 and was awarded the MSc. in Computer Science from Bahauddin Zakariya University (BZU) Multan, Pakistan in 2000. He served as a lecturer of computer science in Network Institute of Computer Education (NICE) from 2001-2006. His research interests include biomedical and energy engineering applications, data recognition, image processing, system embedded programming and machine learning.

Organizer

Prof. Marco Pasian

Ph.D. Coordinator

Prof. Paolo Di Barba

Seminar in English

For more information: marco.pasian@unipv.it