IEEE ETFA 2018

2018 IEEE 23rd International Conference on Emerging Technologies and Factory Automation

Torino, Italy, September 4-7, 2018

Special Session SS06. on "Emerging Technologies, Challenges, and Solutions for Smart Environments"

ORGANIZED AND CO-CHAIRED BY

Dominik Henneke, Institute Industrial IT/OWL University, Lemgo, Germany dominik.henneke@hs-owl.de

Lukasz Wisniewski, Institute Industrial IT/OWL University, Lemgo, Germany lukasz.wisniewski@hs-owl.de

Andrzej Ożadowicz, AGH University of Science and Technology, Krakow, Poland ozadow@agh.edu.pl

Jakub Grela, AGH University of Science and Technology, Krakow, Poland jgrela@agh.edu.pl

Wolfgang Kastner, Vienna University of Technology, Vienna, Austria k@auto.tuwien.ac.at

David Rua, INESC TEC, Porto, Portugal drua@inesctec.pt

OUTLINE

This session brings together industry and academia from different domains (Computer Science, Energy, and Automation) for sharing innovative ideas and concepts based on emerging technologies and solutions dedicated for smart applications and environments. Interoperability between fields, such as Smart City, Mobility, Ambient Assisted Living (AAL), Manufacturing, Grid, or Contracts, will contribute to the definition of a mature, stable and homogeneous Smart Environment. While islanded topics such as BACSs, future manufacturing systems, or modern energy distributions are already mature technologies or are advanced separately, this session allows sharing novel ideas, exploring state of the art challenges, and investigating disruptive concepts across domains. Key aspects in this approach are a common understanding and coherent use of various emerging technologies and solutions such as Cloud Computing, IoT, big data, energy efficiency, a common handling of the occurring problems such as Security, Privacy, QoS, Resilience, Reliability, or (mobile) Connectivity, and, in general, a healthy and regular cross-domain knowledge exchange.

TOPICS

- Applications and case studies on future energy production, consumption and storage, mobility, manufacturing, transportation, or home automation that have potential in other domains
- Energy management applications in buildings and houses using intelligent automation solutions
- New paradigms and trends in forming Smart Environments (including all sub-topics)
- Networked control systems (NCS) for Smart Grid and Smart City applications
- Internet of Things (IoT) in Smart Environments
- Use Cases and Case Studies for Smart Contracts, Digital Currencies, or Distributed Ledger technologies
- Active Demand Response and Demand Management in commercial and residential buildings
- Integration of renewable energy sources (RES) and handling of prosumers
- Security and privacy aspects while integrating Smart Environments with cloud services
- Distributed control networks for residential buildings (Smart Homes)
- Interoperable technologies between domains and with legacy installations

- Wireless communication and sensor technologies for Smart City environments
- Performance analyses
- Smart Factories and new smart applications
- Event-driven and time-triggered architectures in BACS
- Building Energy Management Systems with BACSs and IoT technologies
- Network infrastructures for wide area deployments (e.g. WSN) of e.g. Smart Sensors

Author's schedule (NEW!!!):

- Deadline for submission of special session papers
  April 27, 2018
- Notification of acceptance
  June 1, 2018
- Deadline for submission of final manuscripts
  July 6, 2018