IEEE INTERNATIONAL WORKSHOP ON ADVANCED MOTION CONTROL AMC2020
APRIL 20-22, 2020
KRISTIANSAND, NORWAY

Special Session on

Cross-Domain Applications of Advanced Motion Control for Smart, Green and Interconnected Systems

organized by

Valentin Ivanov, valentin.ivanov@tu-ilmenau.de, Technical University Ilmenau

Aldo Sorniotti, a.sorniotti@surrey.ac.uk, University of Surrey

Alessandro Correa-Victorino, alessandro.victorino@hds.utc.fr, Université de Technologie de Compiègne

Michael Ruderman, michael.ruderman@uia.no, University of Agder

Call for Papers

The proposed special session addresses recent methodological advancements and emerging technologies for intelligent motion control applications focused on eco-friendly cross-domain mechatronic and cyber-physical systems. This area covers diverse technological fields as mobility, renewable energy production, automated driving systems, intelligent manufacturing systems and other relevant areas characterized by (i) cross-domain knowledge processing, (ii) continuously increased number of information flows, and (iii) communication channels. Development process of such systems should properly consider a possible unification of methods and a holistic approach responsible for the dynamics control, state estimation, real-time modelling, and shared validation and testing procedures. In this regard, the purpose of this Special Session is to provide a research forum for generating and exchanging the ideas and results achieved in the discussed areas.

Topics of interest include:
- Electric and automated vehicles
- Automotive mechatronics
- Sensing, estimation, and actuation for environmental mechatronic applications
- Sensors fusion and environment perception in cross-domain applications
- Cyber-security and fail-safety of cross-domain mechatronic systems
- New hardware-in-the-loop and testing technologies