25TH INTERNATIONAL CONFERENCE
ON EMERGING TECHNOLOGIES
AND FACTORY AUTOMATION
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Call for Papers
SS09 - Artificial Intelligence on the Energy 4.0

Organized and Co-Chaired by (sorted by last name)
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❖ **FOCUS**. An effective deployment of the fourth industrial revolution entails the energy efficiency as main driver of the factories of the future. In this regard, the digitalization of the energy is breaking the traditional boundaries between supply and demand. The energy management based on data and artificial intelligence is increasingly decentralized, redefining the generation, transport, distribution, and consumption models in the factory towards the so called Energy 4.0. The Energy 4.0 is, then, a matter of the integration of energy sources and energy demand at the factory, the connection of smart energy networks considering the digital transformation of process automation in plants, and the decision-making based on energy quality, reliability and efficiency.

❖ **TOPICS**

This special session will be focusing on (but not limited to) the following topics and emerging technologies related with the energy management and energy efficiency applied to the factory automation:

- ❖ Cyberphysical systems applied to energy efficiency
- ❖ Optimization and control of power generation plants
- ❖ Artificial intelligence based demand response
- ❖ Predictive maintenance and machine learning applied to energy assets
- ❖ Industrial internet of things in energy management
- ❖ Industrial smart grids: transportation, distribution and energy storage
- ❖ Norms and standards related with power quality and disturbances

❖ **AIM.** In classical automation, energy is considered an input vector but is not integrated into the factory automation system. Current digitization, connectivity and processing technologies allow the energy to become a production variable of the company, and the factory as an active element of the smart grid distribution system. Thus, the aim of this special session is to gather scientific an technical experts to discuss about new consumption models, management strategies and regularization requirements around the energy digitalization over the industrial sector.

❖ **CONFERENCE FORMAT**. The conference will comprise multitrack sessions for regular papers, to present significant and novel research results with a prospect for a tangible impact on the research area and potential implementations, as well as work-in-progress (WIP) and industry practice sessions.

❖ **AUTHOR'S SCHEDULE (2020)**

❖Regular and special sessions papers
Submission deadline ..... April 1
Acceptance notification ..... May 6
Deadline for final manuscripts ..... June 17

❖Work-in-progress/ Industry practice papers
Submission deadline ..... May 13
Acceptance notification .....June 10
Deadline for final manuscripts ..... June 17