

2017 IEEE International Conference on Industrial Informatics

Special Session/ Organized Session on

“Intelligent Engineering of Intelligent Automation Systems” organized by

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Call for Papers

Theme: Industrial Internet is rapidly changing the landscape of manufacturing and other industrial applications. It will have seriously change the way how industrial automation systems are engineered. Now, with basic transparent connectivity achieved thanks to cheap and reliable Internet and mobile technologies, it is time to reshape the time-consuming and error-prone engineering of automation systems so that future automation systems will be collaborative and self-configurable. The emerging concepts of Internet of Things, Intelligent product converge to the promise of a breakthrough in achieving seamless reconfiguration without disrupting plant operations. This special session calls contributions reporting on novel ideas how the future automation systems are to be engineered. The session continues successful history of special sessions on similar topics at INDIN 2015 and 2016.

Topics of interest include, but are not limited to:

- System and software architectures and engineering concepts for intelligent automation systems (model-driven software engineering, object-oriented, component-based design, service-oriented architecture, etc.);
- Applications of artificial intelligence and advanced computing methods for enhancing the engineering efficiency of automation systems development and maintenance;
- New theories, concepts, trends and approaches aiming at automation systems primarily based on peer to peer communicating devices;
- Self-discovery, self-organization and self-reconfiguration achieved using cognitive and multi-agent systems and knowledge engineering;
- Methods for automatic synthesis of automation software and models;
- Standardisation of software architectures and communication protocols for interoperability, portability and configurability;
- Modelling, simulation and verification of industrial automation systems, simulation in the loop technologies;
- Mobile technologies assisting collaboration in automation systems operation and development;
- Pilot applications of automation systems based on the above mentioned concepts (e.g. in manufacturing systems, process control, building automation, smart grid, wireless sensor networks).

Submissions Procedure: All the instructions for paper submission are included in the conference website <http://www.indin2017.i2ar.de>

Deadlines:

Deadline for special sessions proposals	February 17, 2017
Deadline for submission of papers:	March 28, 2017
Notification of acceptance of papers:	May 05, 2017
Final manuscripts due:	June 02, 2017