2017 IEEE International Conference on Industrial Informatics

Special Session/ Organized Session on

Lifecycle Engineering of Cyber Physical Manufacturing Systems

Organized by

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Call for Papers

Theme: The fourth industrial revolution promises to create what has been called the smart factory. The so called smart factory needs to be evolvable and reconfigurable (both hardware and software) to manufacture new products in their lifecycle. It is vital to consider how future manufacturing systems might be effectively configured and supported through their lifecycles and how integration, application modeling, visualization and reuse of such systems might be best achieved. Engineering tools and methods should enable real systems and virtual system representations (i.e. digital twins) to be closely integrated throughout the lifecycle from specification and design through commissioning, validation, operation and reuse of systems.

In a CPS context, the focus of this special session is on how the virtual models of systems can be utilized throughout the lifecycle and related to their physical implementation, e.g., through the design and build phases and how subsequent run-time optimization and reconfiguration can be achieved, including feeding back information related to the product, process and production resources from physical to virtual system model.

The topics for this special session include, but not limited to, the following areas:

- Framework and reference architectures
- Digital factory modelling and simulation tools and methods
- Analytical modelling

A good quality paper may be considered for publication in IEEE Transactions on Industrial Informatics (I.F.=4.708) subjects to further rounds of review

- Verification and validation of Systems
- Data models and tools integration
- Interfaces for coupling with external tools
- Virtual modelling and commissioning
- Mechatronic design approaches
- PLC programming and code generation approaches
- Runtime connectivity and monitoring
- Emerging virtual and augmented reality tools and methods
- Product lifecycle management systems
- Concurrent and collaborative engineering

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

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