Session title: "Engineering and Human Integration in Flexible and Reconfigurable Industrial Systems"

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Short presentation:

The world is assisting to an industrial revolution which is demanding for innovation and adaptations at all the layers and areas of manufacturing. Several keywords have been proposed to this revolution (or evolution), namely Industrie 4.0, Industrial Internet or Industrial Internet of Things (IIoT). Independently of the naming, manufacturing paradigms are being converted from the classical hierarchical rigid structures into a flat and horizontal shape where the building blocks are collaborative and cooperative. Several technologies and paradigms have been pushed into the front, such as Multi-Agent Systems and Service Oriented Architectures.

In this new organization, "virtually" all the blocks can interact each other, imposing several challenges such as the integration of legacy systems, the interoperability among heterogeneous components and the deployment of self-organization features that enable the system to operate in an (semi)-"autonomous" manner.

Alongside and as the automation penetration increases into the manufacturing world, the role of the human is also going through a drastic change, adapting itself accordingly with the new needs.

In such way, this SS is trying to collect contributions on innovative work that focus system engineering aspects focusing particularly the aspects of:

- Innovative manufacturing architectural approaches;
- Plug-and-produce approaches;
- Seamless integration of hardware and software devices;
- Integration of the human role in nowadays manufacturing world;
- Integration of IIoT and real-time data processing;
- Legacy systems migration strategies.

Keywords: Service Oriented Architecture, Cyber Physical Systems, Reconfigurable architectures, Human in the loop, Plug-and-produce, system seamless integration

Important dates:

- Full paper submission: June 20
- Notification of acceptance: July 15
- Final, camera-ready paper submission: August 12
- Early registration and fee payment: August 31