



17th IFAC Symposium on Information Control Problems in Manufacturing

7 – 9 June 2021, Budapest – Hungary

SPECIAL SESSION: Applications for Customizable Smartification of Products

Organizers:

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Powered by the IoT expansion, emerging small form factor (SFF) micro-controllers open the integration possibilities of electronic hardware to new applications of products and objects, expanding their original functionalities with support for intelligent processing.

A new field of consumer products is now capable of sensing capabilities that communicate with their surroundings, and act/react to enhance the consumer quality of life. Such smart products are no longer limited to electric appliances, as new integrations are beginning to be developed in the furniture space, taking advantage of smaller, autonomous, low-power electronics, embedded in the furniture hardware itself. The approach of taking a regular consumer product, such as a chair, a cabinet, or a table, and sensitizing it to extract usage data or to extend its functionalities with recourse to a technological solution, can be called *Smartification*. The Smartification process needs to take into account the functionalities that respond to the user's needs, as well as the requirements and constrains of the design and implementations, depending on the possibilities of combinations available between furniture hardware and electronics.

This special session proposes the research into the possibilities that the Smartification process enables, such as options of compatibility, as well as the new applications that can be developed in this area, with the objective to enhance the costumer's experience, in a "Do-It-Together" co-creation environment.

This session also has the goal to contribute to the Factory of the Future topic. In this sense the main is to explore the possibility to create new manufacturing processes or tools that integrates smartification principles. Just imagine a Factory of the Future, where the "Smartification" surrounds the production on all stages, making the topic of Zero Defects Production, and in broader sense, quality assurance a vital element. This objective may be supported by Digital Marketplaces that may supply with specific tools to support developers in their solutions implementation and exploitation, and by Digital Manufacturing Platforms that provides the ability to connect various parts of the manufacturing lifecycle using digital data to support the use of information for intelligent automation and smarter and more efficient decisions.

Track Topics

This special session calls for original contributions of research, case studies and/or applications, in line with the session topic of Smartification, including (but not limited to) the following topics:

- Embedded Systems
- Internet-of-Things (IoT)
- Digital Transformation Designs
- Collaborative Processes in Manufacturing
- Green/Circular economy
- Smart Systems Interoperability
- Ontology-Based Models for IoT
- Assistive Technologies
- Zero Defects Production
- Do-It-Together Co-Creation
- Digital Twins
- Cyber-Physical Systems (CPS)
- Product Quality Assurance
- Collaborative Digital Marketplaces
- Factory of the Future

Paper Submission

Paper authors are invited to submit the drafted documents using the guidelines for the preparation of manuscripts are provided on the [IFAC website](#).

All manuscripts must be electronically submitted through the [PaperPlaza Conference Manuscript Management System](#). Please use the following Special Session Code, required in the submission form, in order to associate the paper to this session.

Special Session Code: 93cf5

Important Dates (Deadlines):

Draft paper submission: 27th November 2020
Notification of acceptance: 15th December 2020
Camera-ready final manuscripts: 1st February 2021
Early registration: 8th February 2021
Late registration: 1st April 2021
Conference date: 7th-9th June 2021