

IEEE CASE 2021

August 23-27, 2021, Lyon France - (<https://case2021.sciencesconf.org/>)

Special Session on

Robotic control and robotization of tasks within Industry 4.0

Goal: The contribution of robotics in performing industrial tasks such as manipulation, assembly, and manufacturing is undeniable: high accuracy and repeatability, high dynamics and cadence, adaptation to environment, high level programming. These performances were achieved thanks to the amount of research results in terms of robotic modeling, control and by coupling to vision systems. Meanwhile, new challenges are still raising due to industry needs and contexts and thus require attention in terms of improving or adapting the existing robotic capabilities. As an example, robots might work more closely with human within Industry 4.0 context, like a cobot, and as a consequence their behaviors should exhibit more safety, ergonomics and flexibility. Another example concerns the robotization of so far mechanized or manually performed complex tasks which require more focus in terms of modeling and control of the robots, by possibly considering the coupling with 3D vision systems or laser scanner or by introducing the models of the manipulated objects or the tools used.

This special session invites papers in the fields of robotics devoted to the automatization and robotization of tasks in industry. The topics include but are not limited to industrial robotics control, human-robotic modeling and control, simulation of industrial robotic tasks, force control, position control, robotization of tasks and related control and vision systems, cyber-physical robotic control and optimization for fully automated systems, robotization in intelligent manufacturing and industry 4.0.

Contributions from industry describing transfer applications are also very welcomed.

Organizers

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Timetable to contribute to the special session

February 14, 2021: submission intention (title, list of authors) to be sent by email to the organizers

March 1, 2021: submission of the contribution to the special session

The contributions

The contribution can be “regular papers” or “special session presentation-only”.

For regular papers, the length is 6 pages. Two additional pages are allowed subjected to extra charges.

For presentation-only, only two pages of abstract are required. Please see the conference website for more information: <https://case2021.sciencesconf.org/resource/page/id/1>.