



2020 IEEE INTERNATIONAL WORKSHOP ON Metrology for Industry 4.0 & IoT

ROMA, ITALY | JUNE 3-5, 2020

CNR - NATIONAL RESEARCH COUNCIL
HEADQUARTERS - **Piazzale Aldo Moro**

CALL FOR PAPERS for the Special Session on SENSORS FOR COLLABORATIVE ROBOTICS IN INDUSTRY AND HEALTHCARE 4.0

Starting from its introduction, collaborative robotics has gained huge impact in several application fields, such as healthcare and industry. In contrast with traditional robots, that are designed to work in a physically-separated environment with respect to humans, collaborative robots (CoBots) share the same workspace. CoBots are used to perform complex tasks in order to assist the operator by complementing the biomechanical and perceptual capabilities without replacing humans. Depending on the applications, CoBots may increase the efficiency of the work, reduce operator effort, enable new solution and extend human skills. Sensors are a key enabling technologies to allow a CoBot to have representation of the external environment, to perceive and react to unstructured stimuli and thus enabling a safe human-machine interaction.

This special session aims at discussing innovative solutions for collaborative robotics for industry and healthcare 4.0 applications. It will focus on both the development of innovative sensors for collaborative robotics (e.g. contact and proximity sensors, vision-based sensors) and the integration of the sensors to perform collaborative tasks (e.g. trajectory planning and collision avoidance, artificial intelligence solutions and telepresence).

MAIN TOPICS

- Collaborative robotics
- Human-machine interaction
- Contact and proximity sensors
- Haptic interfaces
- Telepresence and teleoperation
- Safe interaction in healthcare and industry 4.0
- Artificial skins
- Manipulation tasks
- Trajectory planning and collision avoidance strategies
- Soft robotics for collaborative robotics
- Artificial Intelligence solutions

ORGANIZERS



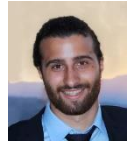
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www.metroind40iot.org/special-session-23

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