

Special Issue

Assessment, Validation and Improvement of Safety and Ergonomics in Human-Robot Interaction

Message from the Guest Editors

In the robotization era, human–robot interactions (HRIs) push the limit toward optimal and synergistic paradigms for the execution of tasks. As a consequence of the closer human–robot interactions, the current challenges in robotic implementation go beyond the technological issues, including safety and ergonomics as fundamental boundaries. Safety-related considerations apply to the whole development, implementation and lifecycle of applications, requiring specific approaches for assessment and validation, control strategies, and other equipment. Furthermore, ergonomics (both physical and cognitive) is fundamental for implementing safe, fluent and efficient collaborative applications. These aspects are even more significant in the context of the Industry 5.0 worker-centric paradigm, where a worker's well-being plays a large role. This Special Issue focuses on the research efforts dealing with the latest safety and ergonomic challenges arising in the assessment, validation and improvement of collaborative robotic applications, while also considering integrated design methodologies, ranging from industry and smart factories to novel application fields.

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Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided. There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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