

Special Issue

Digital Twin-Based Human–Robot Collaborative Systems

Message from the Guest Editor

In recent years, an increasing number of industries have benefited from the use of digital twins. In the field of robotics, a digital twin can be considered a virtual representation of a robot and its processes, within the context of its intended operating environment. Following a digital twin paradigm allows the formation of more reliable virtual platforms for applying the proposed HRI models and studying the complex issues arising from human–robot interactions. In this Special Issue, original research articles and comprehensive reviews are welcome. Contributions may include novel approaches to the application of digital twins in all cycles of robotic development, in various application areas such as manufacturing, agriculture, education, etc. Research areas may include (but are not limited to) the following:• System architectures for digital twins;• Human–robot interaction modeling;• Digital twins for telepresence and teleoperation tasks;• Augmented and virtual reality for digital twins;• Industrial applications and implementation.

Guest Editor

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Deadline for manuscript submissions

closed (31 May 2024)



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About the Journal

Message from the Editor-in-Chief

It is my great pleasure to welcome you to our open access journal, *Robotics*, which is dedicated to both the foundations of artificial intelligence, bio-mechanics and mechatronics, and the real-world applications of robotic perception, cognition and actions. The 21st century is the robotics century and intelligent robots will change our lifestyle forever. Let us work together toward the realization of intelligent robots step by step. It is great fun to create intelligent robots and imagine their practical applications. *Robotics* is now ready to serve you in the long journey towards such a goal.

Editor-in-Chief

Prof. Dr. Marco Ceccarelli

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