

Special Issue

Non-Conventional Kinematic Structures in Modern Collaborative Industrial Robots: Issues and Solutions

Message from the Guest Editors

The spread of cobots in common industrial practice has led constructors preferring the development of collaborative features, which are necessary to prevent injuries to operators, over the realization of simple kinematic structures for which joints-to-workspace mapping is well known. An example is given by the replacement, in serial robots, of spherical wrists with safer solutions, where the danger of crushing and shearing is intrinsically avoided. Despite this tendency, the kinematic map between actuated joints and Cartesian workspace remains paramount importance for robot analysis and programming, deserving the attention of the research community. The objective of this Special Issue is to give visibility to all of the issues raised by such tendencies and the consequent solutions found by researchers and constructors. Topics of interest include, but are not limited to: Non-conventional kinematic structures: applications, drawbacks, and future developments. Control strategies of robots with non-conventional kinematics. Robot designs. Motion and trajectory planning. Redundantly actuated robots.

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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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