Journal of Robotics

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Special Issue on

Uncertainties and Accuracy Losses in Robotic Applications: Definition, Modelling, and Solution Suggestions

CALL FOR PAPERS

Accuracy, sensitivity, and repeatability are the key features that improve the quality of robotic systems for many industrial, medical, and other robotic applications. Many uncertain factors influence these features of robots. Some error sources in robotic applications deteriorate the system performance and they are originated from assemblages, servo actuator resolutions, reducer backlashes, joint clearances, flexibilities, and so on. Robots are susceptible to errors from many sources due to their serial structure. To ensure the working and operational stabilities, many parameters have to be considered in the dynamics and control of robots. In recent years, many researchers in academia and industry have focused on the definition, modelling, and controlling of these problems in robotic applications.

In this special issue, we call for original research articles as well as review articles to address the definition, modelling, and solution of the uncertainties and accuracy loss problems in robotic applications and open-loop systems.

Potential topics include but are not limited to the following:

- Clearance-induced uncertainties and accuracy losses in multilink manipulators
- Joint and/or link flexibilities based uncertainties and deviations in multilink manipulators
- Sensor and/or actuator based sensitivity problems in multilink manipulators and robots
- Software/hardware based uncertainties and accuracy losses in multilink manipulators and robots
- Control based problems and accuracy losses in multilink manipulators and robots
- Uncertainties and accuracy losses in robotic mobile manipulators (aerial, ground, and underwater)
- Solution suggestions for uncertainties and accuracy losses in multilink manipulators and robots

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/jr/uara/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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