Nonlinear Dynamics and Control for Aerospace Robotics

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Message from the Guest Editors

Throughout the history of space exploration, robots have been essential in accomplishing various tasks. Aerospace robots with complex nonlinear dynamics are crucial for on-orbit servicing missions such as docking, repairing, transporting, refueling, assembling, and capturing non-cooperative objects. Therefore, modeling and precisely controlling the nonlinear dynamics of aerospace robots is increasingly important for the successful execution of these missions. All original research and review articles that present advanced methods for space robots in dynamic modeling, simulating, controlling, etc., are welcome.

This Special Issue aims to compile cutting-edge research and innovative solutions in areas such as dynamic modeling, design and optimization, advanced control methods, motion planning, experimental studies, and artificial intelligence applications for space robots. We welcome all papers that include new studies and technologies applicable to space robotics.

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Special Issue

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Message from the Editor-in-Chief

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