# Special Issue

# Dynamics and Control of Space On-Orbit Operations

### Message from the Guest Editors

Space on-orbit operations include a wide range of activities, such as spacecraft rendezvous and docking, satellite servicing, debris removal, in-space assembly, and formation flying. These operations are essential for enhancing the capabilities and longevity of existing space assets, enabling complex space missions such as large space telescopes or deep space exploration platforms, and mitigating the growing threat of space debris. Understanding and mastering the dynamics and control aspects are key to ensuring the success and safety of these operations. This Special Issue is dedicated to presenting the latest advancements and in-depth insights into the dynamics and control of space on-orbit operations, including but not limited to dynamics modeling, control strategies, sensor and actuator technologies, mission planning and optimization, and the simulation and verification of various space on-orbit operations. This Special Issue aims to accelerate the progress and innovation in this critical area of space technology, leading to more efficient, reliable, and ambitious space missions in the coming years.

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### Deadline for manuscript submissions

30 August 2025

**Aerospace**

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Impact Factor 2.2
CiteScore 4.0

mdpi.com/si/228988

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## Editor-in-Chief

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