Special Issue

Modeling, Simulation, and Control of Launch Vehicles

Message from the Guest Editors

With the advent of the so-called “New Space era”, the recent few years have seen a disruptive increase in the competitiveness and versatility of launch vehicles and microlaunchers being designed and built around the world. From a guidance, navigation, and control (GNC) perspective, the increased competitiveness and versatility stems from (a) the development of key capabilities such as launcher reusability and clustered engine configurations, (b) the increasing onboard computation capabilities available today, and (c) the use of design tools and techniques that allow to fully exploit these new capabilities. This Special Issue covers the recent advances on modeling, simulation, and control tools and techniques supporting the development of launcher GNC algorithms and architectures that enable the following:

- Higher flight performance without compromising safety;
- Increased robustness to uncertainties, disturbances, failures, and last-minute changes;
- Faster/simpler GNC (and vehicle) design and validation processes;
- More autonomous mission planning and execution.

Guest Editors

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Deadline for manuscript submissions

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Aerospace adheres to rigorous peer-review as well as editorial processes and publishes high quality manuscripts that address both the fundamentals and applications of aeronautics and astronautics. Our goal is to enable rapid dissemination of high impact works to the scientific community.

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