



Morphing Enabling Technologies for Aerospace Systems

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Message from the Guest Editors

Dear Colleagues,

Flexible morphing deployable aeroshells are increasingly emerging as novel and alternative concepts for performing the controlled re-entry and precise landing of space vehicles. Shape morphing during entry could enable trajectory control by providing enhanced versatility and flight maneuverability, otherwise not achievable with the current rigid decelerators.

This Special Issue is dedicated to novel perspectives in modern de-orbiting and re-entry systems featuring advanced mechanisms for the structural shape control of both inflatable and mechanically deployable systems to accomplish the desired entry trajectories and improved landing accuracy by modulating lift over drag. In the development of solutions to these challenges, articles may address various topics, ranging from the structural design of deployment mechanisms (the physical obstruction producing aerodynamic drag) to the aeroshell's ability to reduce the peak heating rates through a decreased ballistic coefficient, including novel design concepts, entry vehicle trajectory simulations, aerothermal assessments, multibody analyses, and multi-objective optimization.





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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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