Special Issue

Astrodynamics and Celestial Mechanics

Message from the Guest Editors

Celestial mechanics is a classical and old discipline. The research on celestial mechanics, such as the three body problem, has attracted a number of famous scientists including Newton, Euler, Lagrange, Poincaré, Hill, Laplace, Cauchy, and Poisson. The research has generated many new theories in mathematics, dynamics, and physics. The origin of astrodynamics is celestial mechanics. Many classical methods in celestial mechanics, such as perturbation theory and the average method, are still used to design spacecraft orbits today in engineering practice. Several new methods such as invariant manifolds and weekly stable boundary theory have also been developed to handle the orbit or trajectory design in the restricted three body problem. As many new natural celestial bodies are observed and more complex spacecraft missions are proposed, models and methods should be developed to explain the new observed phenomena and design missions. This Special Issue will focus on new methods and results in celestial mechanics and astrodynamics.

Guest Editors

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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.

Editor-in-Chief

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