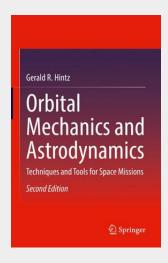
Orbital Mechanics and Astrodynamics

Techniques and Tools for Space Missions

Now in an updated second edition, this classroom-tested textbook covers fundamental and advanced topics in orbital mechanics and astrodynamics designed to introduce readers to the basic dynamics of space flight. The book explains concepts and engineering tools a student or practicing engineer can apply to mission design and navigation of space missions. Through highlighting basic, analytic, and computer-based methods for designing interplanetary and orbital trajectories, the text provides excellent insight into astronautical techniques and tools. The second edition includes new material on the observational basics of orbit determination, information about precision calculations for data used inflight, such as Mars 2020 with the Ingenuity Helicopter, and improvements in mission design procedures, including the automated design of gravity-assist trajectories. Orbital Mechanics and Astrodynamics: Techniques and Tools for Space Missions is ideal for studentsin astronautical or aerospace engineering and related fields, as well as engineers and researchers in space industrial and governmental research and development facilities, as well as researchers in astronautics.

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