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ISBN	3-030-89758-3
Descrizione fisica	1 online resource (349 pages) : illustrations (some color)
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Soggetti	Perturbation (Astronomy) Planets - Orbits
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- Acknowledgments -- Contents -- Nomenclature -- Coordinate Systems -- Latin Characters -- Greek Characters -- Mathematical Symbols and Operators -- Method of Averaging Symbols -- Chapter 1. The n-Body Problem Chapter 2. General Perturbations Chapter 3. Evaluation of Lagranges Brackets Chapter 4. Lagranges Planetary Equations Chapter 5. Expansion of the Perturbation Function Chapter 6. The Earth-Moon System Chapter 7. Potential of an Oblate Spheroid Chapter 8. Effects of General Relativity Chapter 9. Perturbations due to Atmospheric Drag Chapter 10. Periodic Solutions in Nonlinear Oscillations
Sommario/riassunto	This textbook provides details of the derivation of Lagrange's planetary equations and of the closely related Gauss's variational equations, thereby covering a sorely needed topic in existing literature. Analytical solutions can help verify the results of numerical work, giving one confidence that his or her analysis is correct. The authors all experienced experts in astrodynamics and space mission stake on the massive derivation problem step by step in order to help readers identify and understand possible analytical solutions in their own endeavors.