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Nota di contenuto	Contents ; Preface ; Chapter 1 Quasi-periodic Solutions Near the Equilateral Points of the Earth-Moon System ; 1.1 Introduction ; 1.2 Idea of the Resolution Method ; 1.3 The Algebraic Manipulator ; 1.4 The Newton Method ; 1.5 The Program ; 1.6 Results of the Algebraic Manipulator 1.7 Numerical Refinement 1.8 The Neighbourhood of the Computed Nearly Quasi-periodic Solution ; 1.9 Problems and Extensions ; Chapter 2 Global Description of the Orbits Near the L1 Point of the Earth-Sun System in the RTBP ; 2.1 Introduction ; 2.2 The Equations of Motion 2.3 Formal Series Solutions 2.4 On the Convergence of the Series ; 2.5 Towards a Description of the Neighbourhood of L1 ; 2.6 Discussion on the Use of Lissajous Orbits ; 2.7 Effective Reduction to the Central Manifold ; 2.8 Conclusions ; Chapter 3 Quasi-periodic Halo Orbits

Sommario/riassunto

This book studies several problems related to the analysis of planned or possible spacecraft missions. It is divided into four chapters. The first chapter is devoted to the computation of quasiperiodic solutions for the motion of a spacecraft near the equilateral points of the Earth-Moon system. The second chapter gives a complete description of the orbits near the collinear point, L1, between the Earth and the Sun in the restricted three-body problem (RTBP) model. In the third chapter, methods are developed to compute the nominal orbit and to design and test the control strategy for t