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Descrizione fisica	1 online resource (614 p.)
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Soggetti	Aerospace engineering - Data processing Aeronautics - Systems engineering Differentiable dynamical systems Scaling laws (Statistical physics)
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	pt. I. General theory. Introduction ; Asymptotics and approximations ; Asymptotology and dynamic analysis ; Perturbation theory and nonuniformities ; Multiple time scales ; Foundation and generalization -- pt. II. Systems applications. Linear time-invariant systems ; Linear time-varying systems ; Slowly varying linear systems ; Examples ; Stability and parameter sensitivity ; Control of slowly varying systems ; Turning points ; Error analysis -- pt. III. Vehicle mathematical model. Rigid body equations of motion ; Reference frames and coordinate transformations -- pt. IV. Atmospheric flight. Conventional aircraft dynamics ; Reentry dynamics ; Hypervelocity flight dynamics ; Stability analysis of hypervelocity aircraft ; Flying qualities through variable conditions ; Parameter sensitivity of high-speed aircraft ; Transition dynamics of VTOL aircraft ; VTOL aircraft control design ; Boost control of launch vehicles ; Aircraft wing rock in high-angle-of-attack flight ; A general theory of aircraft wing rock -- pt. V. Space flight. Equatorial orbit perturbation ; Satellite attitude prediction ; Attitude control of spinning satellites ; Attitude control of dual-spin satellites ; Geomagnetic attitude control design of satellites ; Deformable reflector stability ; Active control of membrane mirrors ; Nonlinear deformable

reflector ; Heliogyro spacecraft ; Future directions -- Appendix A :
Extension of the n th-derivative operator -- Appendix B : Earth's gravity
field -- Appendix C : Gravity gradient torque -- Appendix D : Linear
periodic systems and Floquet's solution -- Appendix E : Elliptic
integrals and elliptic functions.
