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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Foreword -- Preliminaries on Advanced Calculus -- Hamiltonian Systems Theory -- Normal Forms of Hamiltonian Systems -- Spectral Decomposition of Hamiltonian Matrices -- The General Linear Normalization -- Stability of Equilibria -- Stability of Linear Hamiltonian Systems -- Parametric Resonance -- References -- Index.
Sommario/riassunto	This book introduces the reader to the study of Hamiltonian systems, focusing on the stability of autonomous and periodic systems and expanding to topics that are usually not covered by the canonical literature in the field. It emerged from lectures and seminars given at the Federal University of Pernambuco, Brazil, known as one of the leading research centers in the theory of Hamiltonian dynamics. This book starts with a brief review of some results of linear algebra and advanced calculus, followed by the basic theory of Hamiltonian systems. The study of normal forms of Hamiltonian systems is covered by Ch.3, while Chapters 4 and 5 treat the normalization of Hamiltonian matrices. Stability in non-linear and linear systems are topics in Chapters 6 and 7. This work finishes with a study of parametric

resonance in Ch. 8. All the background needed is presented, from the Hamiltonian formulation of the laws of motion to the application of the Krein-Gelfand-Lidskii theory of strongly stable systems. With a clear, self-contained exposition, this work is a valuable help to advanced undergraduate and graduate students, and to mathematicians and physicists doing research on this topic.