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Titolo	Singularities in gravitational systems : applications to chaotic transport in the solar system // Daniel Benest, Claude Froeschle (editors)
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Singularities, Collisions and Regularization Theory -- The Levi-Civita, KS and Radial-Inversion Regularizing Transformations -- The Birkhoff and B 3 Regularizing Transformations -- Perturbative Methods in Regularization Theory -- Collisions and Singularities in the n-body Problem -- Triple Collision and Close Triple Encounters -- Dynamical and Kinetic Aspects of Collisions -- Chaotic Scattering in Planetary Rings -- Close Encounters in Öpik's Theory -- Generalized Averaging Principle and Proper Elements for NEAs.
Sommario/riassunto	Chaos theory plays an important role in modern physics and related sciences, but -, the most important results so far have been obtained in the study of gravitational systems applied to celestial mechanics. The present set of lectures introduces the mathematical methods used in the theory of singularities in gravitational systems, reviews modeling techniques for the simulation of close encounters and presents the state of the art about the study of diffusion of comets, wandering asteroids, meteors and planetary ring particles. The book will be of use to researchers and graduate students alike.