Record Nr. UNISA996466693003316 Tides in Astronomy and Astrophysics [[electronic resource] /] / edited **Titolo** by Jean Souchay, Stéphane Mathis, Tadashi Tokieda Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, . 2013 **ISBN** 3-642-32961-6 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (XII, 375 p. 138 illus., 60 illus. in color.) Lecture Notes in Physics, , 0075-8450;; 861 Collana Disciplina 521/.1 Soggetti **Astrophysics** Gravitation **Physics** Astrophysics and Astroparticles Classical and Quantum Gravitation, Relativity Theory History and Philosophical Foundations of Physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Tides: A Tutorial -- Investigations of Tides From the Antiquity to Laplace -- Ocean Tides -- Precession and Nutation of the Earth --Tidal Effects of Giant Planets on their Satellites -- Recent Developments in Planet Migration Theory -- Tides in Planetary Systems -- Stellar Tides -- Tides in Colliding Galaxies. Sommario/riassunto Based on the lecture notes of a school titled 'Tides in Astronomy and Astrophysics' that brought together students and researchers, this book focuses on the fundamental theories of tides at different scales of the universe—from tiny satellites to whole galaxies—and on the most recent developments. It also attempts to place the study of tides in a historical perspective. Starting with a general tutorial on tides, the theme of tides is approached in 9 chapters from many directions. They allow non-experts to pick up a physical intuition and a sense of orders of magnitude in the theory of tides. These carefully prepared lecture notes by leaders in the field include many illustrative figures and drawings. Some even offer a variety of simple back-of the-envelope problems.