Record Nr. UNINA9910373932703321 Autore Mayerson Daniel R Titolo Relativity: a journey through warped space and time / / by Daniel R. Mayerson, Anthony M. Charles, Joseph E. Golec Pubbl/distr/stampa Cham: .: Springer International Publishing: .: Imprint: Springer. . 2019 **ISBN** 3-030-18914-7 Edizione [1st ed.] Descrizione fisica 1 online resource (xi, 170 pages): illustrations 530.1 Disciplina 530.11 Relativity (Physics) Soggetti Gravitation Mechanics Classical and Quantum Gravitation, Relativity Theory Classical Mechanics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references Nota di contenuto 1 Introduction -- 2 Fundamentals of Math & Classical Mechanics -- 3 Special Relativity -- 4 General Relativity -- A Quick Reference -- B Answer to Select Problems. This primer brilliantly exposes concepts related to special and general Sommario/riassunto relativity for the absolute beginner. It can be used either as an introduction to the subject at a high school level or as a useful compass for undergraduates who want to move the first steps towards Einstein's theories. The book is enhanced throughout with many useful exercises and beautiful illustrations to aid understanding. The topics covered include: Lorentz transformations, length contraction and time dilation, the twin paradox (and other paradoxes), Minkowski spacetime, the Einstein equivalence principle, curvature of space and spacetime, geodesics, parallel transport, Einstein's equations of general relativity,

black holes, wormholes, cosmology, gravitational waves, time

machines, and much more.