Record Nr. UNINA9910457577903321 Autore Stephani Hans Titolo Relativity: an introduction to special and general relativity / / Hans Stephani [[electronic resource]] Cambridge:,: Cambridge University Press,, 2004 Pubbl/distr/stampa 1-107-14437-X **ISBN** 0-511-64809-X 0-511-18720-3 0-511-56157-1 0-511-61653-8 0-511-18627-4 Edizione [Third edition.] Descrizione fisica 1 online resource (xx, 396 pages) : digital, PDF file(s) Altri autori (Persone) StephaniHans 530.11 Disciplina Soggetti Gravitational fields General relativity (Physics) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Title from publisher's bibliographic system (viewed on 05 Oct 2015). Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover; Half-title; Title; Copyright; Contents; Preface; Notation; I. Special Relativity; II. Riemannian geometry; III. Foundations of Einstein's theory of gravitation; IV. Linearized theory of gravitation, far fields and gravitational waves; V. Invariant characterization of exact solutions; VI. Gravitational collapse and black holes; VII. Cosmology; Bibliography; Index Sommario/riassunto Thoroughly revised and updated, this textbook provides a pedagogical introduction to relativity. It is self-contained, but the reader is expected to have a basic knowledge of theoretical mechanics and electrodynamics. It covers the most important features of both special and general relativity, as well as touching on more difficult topics, such as the field of charged pole-dipole particles, the Petrov classification, groups of motions, gravitational lenses, exact solutions and the structure of infinity. The necessary mathematical tools (tensor calculus. Riemannian geometry) are provided, most of the derivations are given in full, and exercises are included where appropriate. Written as a

textbook for undergraduate and introductory graduate courses, it will

also be of use to researchers working in the field. The bibliography gives the original papers and directs the reader to useful monographs and review papers.