1. Record Nr. UNINA9910855391603321

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Titolo	A Mathematical Journey to Relativity : Deriving Special and General Relativity with Basic Mathematics / / by Wladimir-Georges Boskoff, Salvatore Capozziello
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2024
ISBN	3-031-54823-X
Edizione	[2nd ed. 2024.]
Descrizione fisica	1 online resource (556 pages)
Collana	UNITEXT for Physics, , 2198-7890
Altri autori (Persone)	CapozzielloSalvatore
Disciplina	530.15
Soggetti	Mathematical physics General relativity (Physics) Special relativity (Physics) Quantum theory Geometry, Differential Mathematical Methods in Physics General Relativity Special Relativity Quantum Physics Differential Geometry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Euclidean and Non--Euclidean Geometries: How they appear -- Basic Facts in Euclidean and Minkowski Plane Geometry -- From Projective Geometry to Poincaré Disk. How to carry out a Non-Euclidean Geometry Model -- Revisiting the Differential Geometry of Surfaces in 3D-Spaces -- Basic Differential Geometry Concepts and their Applications -- Differential Geometry at Work: Two Ways of Thinking the Gravity. The Einstein Field Equations from a Geometric Point of View -- Differential Geometry at Work: Euclidean, Non-Euclidean and Elliptic Geometric Models from Geometry and Physics -- Gravity in Newtonian Mechanics -- Special Relativity -- General Relativity and Relativistic Cosmology -- A Geometric Realization of Relativity: the de Sitter Spacetime -- Another Geometric Realization of Relativity: the Anti-de Sitter

	Spacetime -- More than Metric: Geometric Objects for Alternative Pictures of Gravity -- Metric-Affine Theories of Gravity -- Conclusions.
Sommario/riassunto	The 2nd edition of this textbook features more than 100 pages of new material, including four new chapters, as well as an improved discussion of differential geometry concepts and their applications. The textbook aims to provide a comprehensive geometric description of Special and General Relativity, starting from basic Euclidean geometry to more advanced non-Euclidean geometry and differential geometry. Readers will learn about the Schwarzschild metric, the relativistic trajectory of planets, the deflection of light, the black holes, and the cosmological solutions like de Sitter, Friedman-Lemaître-Robertson-Walker, and Gödel ones, as well as the implications of each of them for the observed physical world. In addition, the book provides step-by-step solutions to problems and exercises, making it an ideal introduction for undergraduate students and readers looking to gain a better understanding of Special and General Relativity. In this new edition, a wide discussion on metric-affine theories of gravity and equivalent formulations of General Relativity is reported. The aim is presenting also topics which could be useful for PhD students and researchers studying General Relativity from an advanced point of view.