

1. Record Nr.	UNINA9910797137803321
Autore	Cheng Ta-Pei
Titolo	A College Course on Relativity and Cosmology [[electronic resource]]
Pubbl/distr/stampa	Oxford, : OUP Oxford, 2015
ISBN	0-19-106084-4
Descrizione fisica	1 online resource (724 p.)
Disciplina	530.11
Soggetti	Relativity (Physics) Space and time Gravity Black holes (Astronomy) Cosmology Physics Physical Sciences & Mathematics Physics - General Atomic Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Cover; Preface; Contents; 1 Introduction; 1.1 Relativity as a coordinate symmetry; 1.1.1 Coordinate transformations; 1.1.2 The principle of relativity; 1.2 Einstein and relativity; 1.2.1 The new kinematics; 1.2.2 GR as a field theory of gravitation; Review questions; 2 Special Relativity: The New Kinematics; 2.1 Einstein's two postulates and Lorentz transformation; 2.1.1 Relativity of simultaneity and the new conception of time; 2.1.2 Coordinate-dependent time leads to Lorentz transformation; 2.2 Physics implications of Lorentz transformation; 2.2.1 Time dilation and length contraction 2.2.2 The invariant interval and proper time 2.3 Two counterintuitive scenarios as paradoxes; Review questions; 3 Special Relativity: Flat Spacetime; 3.1 Geometric formulation of relativity; 3.2 Tensors in special relativity; 3.2.1 Generalized coordinates: bases and the metric; 3.2.2 Velocity and momentum 4-vectors; 3.2.3 Electromagnetic field 4-tensor; 3.2.4 The energy-momentum-stress 4-tensor for a field

system; 3.3 The spacetime diagram; 3.3.1 Invariant regions and causal structure; 3.3.2 Lorentz transformation in the spacetime diagram; Review questions

4 Equivalence of Gravitation and Inertia 4.1 Seeking a relativistic theory of gravitation; 4.1.1 Newtonian potential: a summary; 4.1.2 Einstein's motivation for general relativity; 4.2 The equivalence principle: from Galileo to Einstein; 4.2.1 Inertial mass vs. gravitational mass; 4.2.2 Einstein: "my happiest thought"; 4.3 EP leads to gravitational time dilation and light deflection; 4.3.1 Gravitational redshift and time dilation; 4.3.2 Relativity and the operation of GPS; 4.3.3 The EP calculation of light deflection; 4.3.4 Energetics of light transmission in a gravitational field

Review questions

5 General Relativity as a Geometric Theory of Gravity; 5.1 Metric description of a curved manifold; 5.1.1 Gaussian coordinates and the metric tensor; 5.1.2 The geodesic equation; 5.1.3 Local Euclidean frames and the flatness theorem; 5.2 From the equivalence principle to a metric theory of gravity; 5.2.1 Curved spacetime as gravitational field; 5.2.2 GR as a field theory of gravitation; 5.3 Geodesic equation as the GR equation of motion; 5.3.1 The Newtonian limit; Review questions; 6 Einstein Equation and its Spherical Solution; 6.1 Curvature: a short introduction

6.2 Tidal gravity and spacetime curvature 6.2.1 Tidal forces-a qualitative discussion; 6.2.2 Deviation equations and tidal gravity; 6.3 The GR field equation; 6.3.1 Einstein curvature tensor; 6.3.2 Einstein field equation; 6.3.3 Gravitational waves; 6.4 Geodesics in Schwarzschild spacetime; 6.4.1 The geometry of a spherically symmetric spacetime; 6.4.2 Curved spacetime and deflection of light; 6.4.3 Precession of Mercury's orbit; Review questions; 7 Black Holes; 7.1 Schwarzschild black holes; 7.1.1 Time measurements around a black hole; 7.1.2 Causal structure of the Schwarzschild surface

7.1.3 Binding energy to a black hole can be extremely large

Sommario/riassunto

This advanced undergraduate text introduces Einstein's general theory of relativity. The topics covered include geometric formulation of special relativity, the principle of equivalence, Einstein's field equation and its spherical-symmetric solution, as well as cosmology. An emphasis is placed on physical examples and simple applications without the full tensor apparatus. It begins by examining the physics of the equivalence principle and looks at how it inspired Einstein's idea of curved spacetime as the gravitational field. At a more mathematically accessible level, it provides a metric descr

2. Record Nr.	UNINA9910817121203321
Autore	Goodearl K. R.
Titolo	Classification of ring and C-algebra direct limits of finite-dimensional semisimple real algebras / / K. R. Goodearl and D. E. Handelman
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , 1987 ©1987
ISBN	1-4704-0788-4
Descrizione fisica	1 online resource (161 p.)
Collana	Memoirs of the American Mathematical Society, , 0065-9266 ; ; Number 372
Disciplina	512/.55
Soggetti	C*-algebras K-theory Von Neumann regular rings
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"September 1987, Volume 69, Number 372 (end of volume)."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""CONTENTS""; ""INTRODUCTION""; ""I. BACKGROUND""; ""II. DESCRIPTION OF THE INVARIANT""; ""III. FULLNESS OF THE INVARIANT""; ""IV. FAITHFULNESS OF THE INVARIANT (UP TO INNER AUTOMORPHISMS)""; ""V. COMPLETENESS OF THE INVARIANT""; ""VI. PROPERTIES OF THE INVARIANT""; ""VII. APPLICATIONS""; ""VIII. FORM OF THE INVARIANT""; ""IX. ALGEBRAS OF TYPE $\mathbb{R}$ ""; ""X. ALGEBRAS OF TYPE $\mathbb{C}$ ""; ""XI. MINIMALITY OF THE INVARIANT""; ""XII. NON-UNITAL $K[\text{sub}(0)]$ ""; ""XIII. CLASSIFICATION OF NON-UNITAL DIRECT LIMITS""; ""XIV. REAL AF C*-ALGEBRAS""; ""XV. PERIOD TWO AUTOMORPHISMS OF COMPLEX AF"" ""XVI. REMARKS AND PROBLEMS""""REFERENCES""; ""INDEX OF DEFINITIONS""

3. Record Nr.	UNIORUON00187707
Autore	SHINAHARA, Miyoei
Titolo	Growth and cicles in the Japanese economy / Miyoei Shinahara
Pubbl/distr/stampa	Tokyo, : Kinokuniya Bookstore, 1962. VIII, 349 p. ; 22 cm.
Soggetti	Economia - Giappone Giappone - Economia - Studi
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia