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Titolo	Complex general relativity [[electronic resource] /] / by Giampiero Esposito
Pubbl/distr/stampa	Dordrecht ; ; Boston, : Kluwer Academic Publishers, c1995
ISBN	1-280-53714-0 9786610537143 0-306-47118-3
Edizione	[1st ed. 2002.]
Descrizione fisica	1 online resource (219 p.)
Collana	Fundamental theories of physics ; ; v. 69
Disciplina	530.1/1
Soggetti	General relativity (Physics) Quantum gravity Supersymmetry Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 187-194) and index.
Nota di contenuto	Spinor form of General Relativity -- to Complex Space-Time -- Two-Component Spinor Calculus -- Conformal Gravity -- Holomorphic Ideas in General Relativity -- Twistor spaces -- Penrose Transform for Gravitation -- Torsion and Supersymmetry -- Complex Space-Times with Torsion -- Spin-1/2 Fields in Riemannian Geometries -- Spin-3/2 Potentials -- Mathematical Foundations -- Underlying Mathematical Structures.
Sommario/riassunto	This book is written for theoretical and mathematical physicists and mat- maticians interested in recent developments in complex general relativity and their application to classical and quantum gravity. Calculations are presented by paying attention to those details normally omitted in research papers, for pedagogical r- sons. Familiarity with fibre-bundle theory is certainly helpful, but in many cases I only rely on two-spinor calculus and conformally invariant concepts in gravitational physics. The key concepts the book is devoted to are complex manifolds, spinor techniques, conformal gravity, ?-planes, ?-surfaces, Penrose transform, complex 3 1 – – space-time models with non-vanishing torsion, spin- fields and spin- potentials. 2 2 Problems have

been inserted at the end, to help the reader to check his und- standing of these topics. Thus, I can find at least four reasons for writing yet another book on spinor and twistor methods in general relativity: (i) to write a textbook useful to - ginning graduate students and research workers, where two-component spinor c- culus is the unifying mathematical language.