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Titolo	Einstein in Matrix Form : Exact Derivation of the Theory of Special and General Relativity without Tensors / / by Günter Ludyk
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Collana	Graduate Texts in Physics, , 1868-4513
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Soggetti	Gravitation Mechanics Mechanics, Applied Chemistry, Physical and theoretical Mathematical physics Classical and Quantum Gravitation, Relativity Theory Theoretical and Applied Mechanics Theoretical and Computational Chemistry Classical Mechanics Mathematical Physics
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 (pages 189-190) and index.
Nota di contenuto	From the Contents: Special Relativity -- The Galilei Transformation -- The Lorentz Transformation -- The Invariance of Quadratic Forms -- Velocity Addition -- Lorentz Transformation of Velocities -- Lorentz Transformation of Impulses -- Acceleration and Force -- Relativistic Electrodynamics -- Energy Momentum Matrix -- General Relativity -- General Relativity and Riemannian Geometry.
Sommario/riassunto	This book is an introduction to the theories of Special and General Relativity. The target audience are physicists, engineers and applied scientists who are looking for an understandable introduction to the topic - without too much new mathematics. The fundamental equations of Einsteins theory of Special and General Relativity are derived using matrix calculus, without the help of tensors. This feature makes the book special and a valuable tool for scientists and engineers with no

experience in the field of tensor calculus. In part I the foundations of Special Relativity are developed, part II describes the structure and principle of General Relativity. Part III explains the Schwarzschild solution of spherical body gravity and examines the "Black Hole" phenomenon. Any necessary mathematical tools are user friendly provided, either directly in the text or in the appendices.
