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Titolo	Theoretical Physics 4 : Special Theory of Relativity // by Wolfgang Nolting
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ISBN	3-319-44371-2
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XII, 143 p. 15 illus.)
Disciplina	530
Soggetti	Gravitation Physics Classical and Quantum Gravitation, Relativity Theory Mathematical Methods in Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Basic physical principles -- Covariant four-dimensional representations -- Solutions of the exercises.
Sommario/riassunto	This concise textbook offers a clear and comprehensive introduction to special relativity, one of the core components of undergraduate physics courses. It follows on naturally from the previous volumes in this series, thus developing the relativistic expansion of classical mechanics and electrodynamics. The first part of the book introduces Lorentz transformations, time dilation, length contraction and Minkowski diagrams. More complex themes are covered in the second part of the book, which describes the four-dimensional covariant formulation for classical mechanics and electrodynamics, including discussion of Maxwell's equations, the Lorentz force and the covariant Lagrangian formulation. Ideally suited to undergraduate students with some grounding in classical mechanics and electrodynamics, the book is enhanced throughout with learning features such as boxed inserts and chapter summaries, with key mathematical derivations highlighted to aid understanding. The text is supported by numerous worked examples and end of chapter problem sets. About the Theoretical Physics series Translated from the renowned and highly successful German editions, the eight volumes of this series cover the complete

core curriculum of theoretical physics at undergraduate level. Each volume is self-contained and provides all the material necessary for the individual course topic. Numerous problems with detailed solutions support a deeper understanding. Nolting is famous for his refined didactical style and has been referred to as the "German Feynman" in reviews.

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