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Titolo	Special Relativity for the Enthusiast // Thomas Strohm
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ISBN	9783031219245 9783031219238
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (347 pages)
Disciplina	530.11
Soggetti	Special relativity (Physics) Textbooks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- The limits of classical mechanics -- The relativity principle of classical mechanics -- Waves and light -- The unsuccessful quest for the absolute inertial frame -- Einstein's solution: the special theory of relativity -- Relativity of simultaneity -- Length contraction -- Time dilatation -- Relativistic addition of velocities -- The Lorentz transformation -- Energy and momentum -- Electrodynamics -- Résumé -- Bibliography -- Index.
Sommario/riassunto	This textbook introduces special relativity with a focus on a profound understanding of the physics behind the theory. The main part of the book is targeted to undergraduates, for physics education, for undergraduate students in natural sciences in general, and even to interested laypersons. To serve these target groups, the book uses only basic mathematics and, in contrast to many other introductions to special relativity, the book is based on a pedagogical approach that relies on geometry and space-time diagrams to make the surprising predictions of the theory particularly clear. Special relativity is a geometric theory, and space-time diagrams are an efficient and easily understandable way to comprehend its implications. The textbook, however, is also suitable for advanced students and enthusiasts that already learned the basics of the special theory of relativity and want to

know more. Special digression sections provide plenty of interesting material. Carefully selected problems with solutions and in-depth explanations for all key experiments help deepen the knowledge.
