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Nota di contenuto	Cover; Half-title; Title; Copyright; Dedication; Contents; Preface; Part I Fundamentals; Part II Advanced Topics; Appendix 1 Where do equations of motion come from?; Appendix 2 Basic group theory; Appendix 3 Lie groups and Lie algebras; Appendix 4 The structure of super Lie algebras; References; Index
Sommario/riassunto	This book provides a thorough introduction to Einstein's special theory of relativity, suitable for anyone with a minimum of one year's university physics with calculus. It is divided into fundamental and advanced topics. The first section starts by recalling the Pythagorean rule and its relation to the geometry of space, then covers every aspect of special relativity, including the history. The second section covers the impact of relativity in quantum theory, with an introduction to relativistic quantum mechanics and quantum field theory. It also goes over the group theory of the Lorentz group, a simple introduction to supersymmetry, and ends with cutting-edge topics such as general

relativity, the standard model of elementary particles and its extensions, superstring theory, and a survey of important unsolved problems. Each chapter comes with a set of exercises. The book is accompanied by a CD-ROM illustrating, through interactive animation, classic problems in relativity involving motion.

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