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Nota di contenuto	Preface; 1. Spin and helicity; 2. The effect of Lorentz and discrete transformations on helicity states, fields and wave-functions; 3. The spin density matrix; 4. Transition amplitudes; 5. The observables of a reaction; 6. The production of polarized hadrons; 7. The production of polarized e±; 8. Analysis of polarized states: polarimetry; 9. Electroweak interactions; 10. Quantum chromodynamics: spin in the world of massless partons; 11. The spin of the nucleon: polarized deep inelastic scattering; 12. Two-spin and parity-violating single spin asymmetries at large scale; 13. One particle inclusive transverse single-spin asymmetries; 14. Elastic scattering at high energies; Appendices.
Sommario/riassunto	Motivated by dramatic developments in the field, this book provides a thorough introduction to spin and its role in elementary particle physics. Starting with a simple pedagogical introduction to spin and its relativistic generalisation, the author avoids the obscurity and impenetrability of traditional treatments of the subject. The book surveys the main theoretical and experimental developments, as well as discussing exciting plans for the future. Emphasis is placed on the importance of spin-dependent measurements in testing QCD and the Standard Model. This book will be of value to graduate students and researchers working in all areas of quantum physics and particularly in elementary particle and high energy physics. It is suitable as a supplementary text for graduate courses in theoretical and