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Nota di contenuto	Intro -- Preface -- Acknowledgements -- Contents -- 1 Understanding the Universe: Cosmology, Astrophysics, Particles, and Their Interactions -- 2 Basics of Particle Physics -- 3 Cosmic Rays and the Development of Particle Physics -- 4 Particle Detection -- 5 Particles and Symmetries -- 6 Interactions and Field Theories -- 7 The Higgs Mechanism and the Standard Model of Particle Physics -- 8 The Standard Model of Cosmology and the Dark Universe -- 9 The Properties of Neutrinos -- 10 Messengers from the High-Energy Universe -- 11 Astrobiology and the Relation of Fundamental Physics to Life -- Appendix A Particle Physics Exams -- A.1 Discovery of the Positron -- A.2 Observation of the Glashow Resonance at IceCube -- A.3 Investigation of the Z Boson at SLAC -- A.4 Deep Inelastic Scattering in the ZEUS Experiment -- A.5 Discovery of the J/ Meson -- A.6 Muon/Anti-muon Collider -- A.7 Rare Decays at the LHCb Experiment -- A.8 Neutrino-Nucleon Cross-Section at Very-High-Energies -- A.9 Direct Observation of the Tau Neutrino -- A.10 Pion-Nucleon Cross-Section -- Appendix B Particle Physics Exams [Solutions] -- B.1 Discovery of the Positron -- B.2 Observation of the Glashow Resonance at IceCube -- B.3 Investigation of the Z Boson at SLAC -- B.4 Deep Inelastic Scattering in the ZEUS Experiment -- B.5 Discovery of the J/ Meson -- B.6 Muon/Anti-Muon Collider -- B.7 Rare Decays at the LHCb Experiment -- B.8 Neutrino-Nucleon Cross-Section at Very-High-Energies -- B.9 Direct Observation of the Tau Neutrino -- B.10 Pion-Nucleon Cross-Section

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