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Descrizione fisica	1 online resource (666 p.) : illustrations
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Soggetti	Physics - Philosophy Physics - Social aspects String models Quantum theory Cosmology
Lingua di pubblicazione	Italiano
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Note generali	Fashion, faith, and fantasy in the new physics of the universe [Tit. orig.]
Nota di bibliografia	Includes bibliographical references and index
Nota di contenuto	Fashion. Mathematical elegance as a driving force ; Some fashionable physics of the past ; Particle-physics background to string theory ; The superposition principle in QFT ; The power of Feynman diagrams ; The original key ideas of string theory ; Time in Einstein's general relativity ; Weyl's gauge theory of electromagnetism ; Functional freedom in Kaluza-Klein and string models ; Quantum obstructions to functional freedom? ; Classical instability of higher-dimensional string theory ; The fashionable status of string theory ; M-theory ; Supersymmetry ; AdS/CFT ; Brane-worlds and the landscape -- Faith. The quantum revelation ; Max Planck's $E = hv$; The wave-particle paradox ; Quantum and classical levels : C, U, and R ; Wave function of a point-like particle ; Wave function of a photon ; Quantum linearity ; Quantum measurement ; The geometry of quantum spin ; Quantum entanglement and EPR effects ; Quantum functional freedom ; Quantum reality ; Objective quantum state reduction : a limit to the quantum faith? -- Fantasy. The Big Bang and FLRW cosmologies ; Black holes and

local irregularities ; The second law of thermodynamics ; The Big Bang paradox ; Horizons, comoving volumes, and conformal diagrams ; The phenomenal precision in the Big Bang ; Cosmological entropy? ; Vacuum energy ; Inflationary cosmology ; The anthropic principle ; Some more fantastical cosmologies -- A new physics for the universe? Twistor theory : an alternative to strings? ; Whither quantum foundations? ; Conformal crazy cosmology? ; A personal coda -- Appendix A. Mathematical appendix. Iterated exponents ; Functional freedom of fields ; Vector spaces ; Vector bases, coordinates, and duals ; Mathematics of manifolds ; Manifolds in physics ; Bundles ; Functional freedom via bundles ; Complex numbers ; Complex geometry ; Harmonic analysis
