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Nota di contenuto	1. The nature of things -- 2. Matter and motion in space and time -- 3. Reality large and small -- 4. The language of nature -- 5. More is different -- 6. The machinery of particle discovery -- 7. The Standard Model -- 8. The proliferation of matter -- Epilogue: beneath reality -- Appendix: how quantum mechanics is used
Sommario/riassunto	"Questions of the fundamental nature of matter continue to inspire and engage our imagination. However, the exciting new concepts of strings, supersymmetry and exotic matter build on ideas that are well known to physicists but mysterious and puzzling to people outside of these research fields. Covering key conceptual developments from the last century, this book provides a background to the bold ideas and challenges faced by physicists today. Quantum theory and the Standard Model of particles are explained with minimal mathematics, and advanced topics, such as gauge theory and quantum field theory, are put into context. With concise, lucid explanations, this book is an essential guide to the world of particle physics"-- "This picture of the winding state vector glosses over the subtlety that we freely choose when as well as where or what to measure. The Dirac view separates the abstract state vector from all of these contingent choices. Moreover, the principles of relativity demand that we treat when and where (time and space) on a more or less equal footing. Thus a better choice for an omniscient picture corresponding to the classical 'tapestry of world lines' is a Master State Vector for all of nature in an

abstract Hilbert space 'outside of space and time' whose coordinates bear labels for time as well as for distance or momentum and other properties. In this picture space-time, being a property of the detectors, not the underlying stuff, is a macroscopic phenomenon. For historical reasons, the picture in which the state vector depends on time is called the Schrodinger picture, and the alternative static case is called the Heisenberg picture"--