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Nota di contenuto	Some Mathematical Foundations of Quantum Mechanics -- The Measurement Problem -- Chance in Physics -- Bohmian Mechanics -- Collapse Theory -- The Many-Worlds Theory -- The Measurement Process and Observables -- Weak Measurements of Trajectories -- Hidden Variables -- Nonlocality -- Relativistic Quantum Theory -- Further Food for Thought -- Epilogue.
Sommario/riassunto	This book discusses the physical and mathematical foundations of modern quantum mechanics and three realistic quantum theories that John Stuart Bell called "theories without observers" because they do not merely speak about measurements but develop an objective picture of the physical world. These are Bohmian mechanics, the GRW collapse theory, and the Many Worlds theory. The book is ideal to accompany or supplement a lecture course on quantum mechanics, but also suited for self-study, particularly for those who have completed such a course but are left puzzled by the question: "What does the mathematical formalism, which I have so laboriously learned and applied, actually tell us about nature?".