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| Autore | Maes Christian |
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| Nota di contenuto | Chapter 1. The Winners Are -- Chapter 2. Free Fall -- Chapter 3. Electromagnetic and Optical Unification -- Chapter 4. Looking at Fluctuations -- Chapter 5. Quantization -- Chapter 6. Wave-like Nature -- Chapter 7. Finding Structure: Scattering and Fission -- Chapter 8. Light in the Universe and the Invariance of Proper Time -- Chapter 9. Dynamical Activity of the Vacuum -- Chapter 10. Phase Transitions -- Chapter 11. Nonlocality: Spooky Action at a Distance -- Chapter 12. Future Experiments. . |
| Sommario/riassunto | The main aim of this book is to shine a spotlight on key experiments |

and their crucial importance for advancing our understanding of physics. Physics is an empirical science, and experiments have always been a driving force in the development of our understanding of nature. Facts matter. In that sense, the book attempts to be complementary to the many popularizations of theoretical physics, and to counterbalance the frequent emphasis there on more speculative ideas. Experimental physics is also an essential pillar in physics teaching, as well as helping broader audiences to better understand important concepts, particularly in challenging fields such as relativity or quantum physics, where our common sense intuition often fails. Readers are taken on an historical journey, starting with “Free Fall” and culminating in “Spooky Action at a Distance”. En route they will encounter many important branches of physics, whose main ideas and theoretical description will be given a more empirical meaning. At the end, the reader is invited to reflect on what could be exciting and important directions for fundamental physics. All readers with an undergraduate degree in physical sciences or engineering will enjoy and learn much from this stimulating and original text.
