

1. Record Nr.	UNINA9910450684903321
Autore	Huang Kerson <1928-2016.>
Titolo	Fundamental forces of nature [[electronic resource]] : the story of gauge fields // Kerson Huang
Pubbl/distr/stampa	Singapore ; ; Hackensack, NJ, : World Scientific, c2007
ISBN	1-281-12177-0 9786611121778 981-277-071-2
Descrizione fisica	1 online resource (285 p.)
Disciplina	530.1435
Soggetti	Gauge fields (Physics) Equations of motion Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Contents; Preface; Introduction; 1. What Makes the World Tick?; 2. Electromagnetism; 3. The Vacuum is the Medium; 4. Let There be Light; 5. Heroic Age: The Struggle for Quantum Theory; 6. Quantum Reality; 7. What is Charge?; 8. The Zen of Rotation; 9. Yang-Mills Field: Non-Commuting Charges; 10. Photons Real and Virtual; 11. Creation and Annihilation; 12. The Dynamical Vacuum; 13. Elementary Particles; 14. The Fall of Parity; 15. The Particle Explosion; 16. Quarks; 17. All Interactions are Local; 18. Broken Symmetry; 19. Quark Confinement; 20. Hanging Threads of Silk 21. The World in a Grain of Sand 22. In the Space of All Possible Theories; Epilogue: Beauty is Truth; Appendix. Nobel Prize in Physics; Name Index; Subject Index
Sommario/riassunto	Gauge fields are the messengers carrying signals between elementary particles, enabling them to interact with each other. Originating at the level of quarks, these basic interactions percolate upwards, through nuclear and atomic physics, through chemical and solid state physics, to make our everyday world go round. This book tells the story of gauge fields, from Maxwell's 1860 theory of electromagnetism to the 1954 theory of Yang and Mills that underlies the Standard Model of

elementary particle theory. In the course of the narration, the author introduces people and events in experimental and
