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Nota di contenuto	Foreword; Part I. Fields: 1. Introduction; 2. The electromagnetic field; 3. Field parameters; 4. The action principle; 5. Classical field dynamics; 6. Statistical interpretation of the field; 7. Examples and applications; Part II. Groups and Fields: 8. Field transformations; 9. Spacetime transformations; 10. Kinematical and dynamical transformations; 11. Position and momentum; 12. Charge and current; 13. The non-relativistic limit; 14. Unified kinematics and dynamics; 15. Epilogue: quantum field theory; Part III. Reference: A Compendium of Fields: 16. Gallery of definitions; 17. The Schrödinger field; 18. The real Klein Gordon field; 19. The complex Klein Gordon field; 20. The Dirac field; 21. The Maxwell radiation field; 22. The massive Proca field; 23. Non-Abelian fields; 24. Chern-Simons theories; 25. Gravity as a field theory; Part IV. Appendices.
Sommario/riassunto	Bringing together the key ideas from nonequilibrium statistical mechanics and powerful methodology from quantum field theory, this 2008 book captures the essence of nonequilibrium quantum field theory. Beginning with the foundational aspects of the theory, the book presents important concepts and useful techniques, discusses issues of basic interest, and shows how thermal field, linear response, kinetic theories and hydrodynamics emerge. It also illustrates how these concepts are applied to research topics including nonequilibrium phase transitions, thermalization in relativistic heavy ion collisions, the

nonequilibrium dynamics of Bose-Einstein condensation, and the generation of structures from quantum fluctuations in the early Universe. This self-contained book is a valuable reference for graduate students and researchers in particle physics, gravitation, cosmology, atomic-optical and condensed matter physics. It has been reissued as an Open Access publication on Cambridge Core.
