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Soggetti	Quantum field theory String models Nuclear physics Heavy ions Phase transformations (Statistical physics) Condensed matter Particles (Nuclear physics) Gravitation Quantum Field Theories, String Theory Nuclear Physics, Heavy Ions, Hadrons Quantum Gases and Condensates Elementary Particles, Quantum Field Theory Classical and Quantum Gravitation, Relativity Theory
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- General relativity and black holes -- Black holes and thermodynamics -- Strong interaction and gauge theories -- The road to AdS/CFT -- The AdS spacetime -- AdS/CFT - equilibrium -- AdS/CFT - adding probes -- Basics of nonequilibrium physics -- AdS/CFT - non-equilibrium -- Other AdS spacetimes -- Applications to quark-gluon plasma -- Basics of phase transition -- AdS/CFT - phase transition.
Sommario/riassunto	This book describes applications of the AdS/CFT duality to the "real world." The AdS/CFT duality is an idea that originated from string theory and is a powerful tool for analyzing strongly-coupled gauge theories using classical gravitational theories. In recent years, it has

been shown that one prediction of AdS/CFT is indeed close to the experimental result of the real quark–gluon plasma. Since then, the AdS/CFT duality has been applied to various fields of physics; examples are QCD, nuclear physics, condensed-matter physics, and nonequilibrium physics. The aim of this book is to provide background materials such as string theory, black holes, nuclear physics, condensed-matter physics, and nonequilibrium physics as well as key applications of the AdS/CFT duality in a single volume. The emphasis throughout the book is on a pedagogical and intuitive approach focusing on the underlying physical concepts. It also includes step-by-step computations for important results, which are useful for beginners. This book will be a valuable reference work for graduate students and researchers in particle physics, general relativity, nuclear physics, nonequilibrium physics, and condensed-matter physics. .