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Descrizione fisica	1 online resource (XVI, 511 p. 144 illus., 6 illus. in color.)
Collana	Lecture notes in physics ; ; 769
Altri autori (Persone)	PapantonopoulosE (Eleftherios)
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Soggetti	Astrophysics Black holes (Astronomy)
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Conference proceedings.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Black Holes and their Properties -- What Exactly is the Information Paradox? -- Classical Yang–Mills Black Hole Hair in Anti-de Sitter Space -- Black Hole Thermodynamics and Statistical Mechanics -- Colliding Black Holes and Gravitational Waves -- Numerical Simulations of Black Hole Formation -- Higher-Dimensional Black Holes -- Black Holes in Higher-Dimensional Gravity -- Braneworld Black Holes -- Higher Order Gravity Theories and Their Black Hole Solutions -- Gravitational Waves from Braneworld Black Holes -- Black Holes at the Large Hadron Collider -- Perturbations of Black Holes -- Perturbations and Stability of Higher-Dimensional Black Holes -- Analytic Calculation of Quasi-Normal Modes.
Sommario/riassunto	Black Holes are still considered to be among the most mysterious and fascinating objects in our universe. Awaiting the era of gravitational astronomy, much progress in theoretical modeling and understanding of classical and quantum black holes has already been achieved. The present volume serves as a tutorial, high-level guided tour through the black-hole landscape: information paradox and blackhole thermodynamics, numerical simulations of black-hole formation and collisions, braneworld scenarios and stability of black holes with respect to perturbations are treated in great detail, as is their possible occurrence at the LHC. An outgrowth of a topical and tutorial summer school, this extensive set of carefully edited notes has been set up with

the aim of constituting an advanced-level, multi-authored textbook which meets the needs of both postgraduate students and young researchers in the fields of modern cosmology, astrophysics and (quantum) field theory.

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