Record Nr. UNINA9910254618003321 Astrophysics of Black Holes: From Fundamental Aspects to Latest **Titolo** Developments / / edited by Cosimo Bambi Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 2016 **ISBN** 3-662-52859-2 Edizione [1st ed. 2016.] 1 online resource (XI, 207 p. 35 illus.) Descrizione fisica Collana Astrophysics and Space Science Library, , 0067-0057;; 440 Disciplina 523.01 Soggetti **Astrophysics** Gravitation Astrophysics and Astroparticles Classical and Quantum Gravitation, Relativity Theory Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Nota di contenuto Preface -- Black Hole Accretion Discs -- Black hole X-ray binaries --Measuring spin: implications for our understanding of black hole accretion physics -- Jet and wind from black hole accretion flows --Gravitational Waves: a new tool for observing the Universe -- A brief review of relativistic gravitational collapse -- General relativity in a nutshell. Sommario/riassunto This book discusses the state of the art of the basic theoretical and observational topics related to black hole astrophysics. It covers all the main topics in this wide field, from the theory of accretion disks and formation mechanisms of jet and outflows, to their observed electromagnetic spectrum, and attempts to measure the spin of these objects. Black holes are one of the most fascinating predictions of general relativity and are currently a very hot topic in both physics and astrophysics. In the last five years there have been significant advances in our understanding of these systems, and in the next five years it should become possible to use them to test fundamental physics, in particular to predict the general relativity in the strong field regime. The book is both a reference work for researchers and a textbook for graduate students.