

| | |
|-------------------------|---|
| 1. Record Nr. | UNINA9910300536003321 |
| Autore | Bambi Cosimo |
| Titolo | Introduction to General Relativity : A Course for Undergraduate Students of Physics // by Cosimo Bambi |
| Pubbl/distr/stampa | Singapore : , : Springer Singapore : , : Imprint : Springer, , 2018 |
| ISBN | 981-13-1090-4 978-981-13-1090-4 |
| Edizione | [1st ed. 2018.] |
| Descrizione fisica | 1 online resource (XVI, 335 p. 39 illus., 35 illus. in color.) |
| Collana | Undergraduate Lecture Notes in Physics, , 2192-4791 |
| Disciplina | 530.11 |
| Soggetti | Gravitation Astronomy Astrophysics Classical and Quantum Gravitation, Relativity Theory Astronomy, Astrophysics and Cosmology |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Introduction -- Special Relativity -- Relativistic mechanics -- Electromagnetism -- Riemannian Geometry -- General Relativity -- Einstein's Gravity -- Schwarzschild Spacetime -- Classical Tests of General Relativity -- Black Holes -- Cosmological Models -- Gravitational waves. |
| Sommario/riassunto | Following the approach of Lev Landau and Evgenii Lifshitz, this book introduces the theory of special and general relativity with the Lagrangian formalism and the principle of least action. This method allows the complete theory to be constructed starting from a small number of assumptions, and is the most natural approach in modern theoretical physics. The book begins by reviewing Newtonian mechanics and Newtonian gravity with the Lagrangian formalism and the principle of least action, and then moves to special and general relativity. Most calculations are presented step by step, as is done on the board in class. The book covers recent advances in gravitational wave astronomy and provides a general overview of current lines of research in gravity. It also includes numerous examples and problems in each chapter. |

