1. Record Nr. UNINA9910300550603321

Titolo	Accretion Flows in Astrophysics / / edited by Nikolay Shakura
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-93009-5
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (xx, 419 pages) : illustrations
Collana	Astrophysics and Space Science Library, , 0067-0057 ; ; 454
Disciplina	523.841
Soggetti	Astrophysics Fluids Plasma (Ionized gases) Astrophysics and Astroparticles Fluid- and Aerodynamics Plasma Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- The Standard Model of Disc Accretion -- The Properties of Spherical Geodesics in the Kerr Metric -- Relativistic Standard Accretion Disc -- Relativistic Twisted Accretion Disc -- Structure of Accretion Discs in Lensed QSOs -- Transient Dynamics of Perturbations in Astrophysical Discs -- Quasi-spherical Subsonic Accretion onto Magnetized Neutron Stars -- On the Properties of Velikhov-Chandrasekhar MRI in Ideal and Non-ideal Plasmas.
Sommario/riassunto	This book highlights selected topics of standard and modern theory of accretion onto black holes and magnetized neutron stars. The structure of stationary standard discs and non-stationary viscous processes in accretion discs are discussed to the highest degree of accuracy analytic theory can provide, including relativistic effects in flat and warped discs around black holes. A special chapter is dedicated to a new theory of subsonic settling accretion onto a rotating magnetized neutron star. The book also describes supercritical accretion in quasars and its manifestation in lensing events. Several chapters cover the underlying physics of viscosity in astrophysical discs with some important aspects of turbulent viscosity generation. The book is aimed at specialists as

well as graduate students interested in the field of theoretical astrophysics.