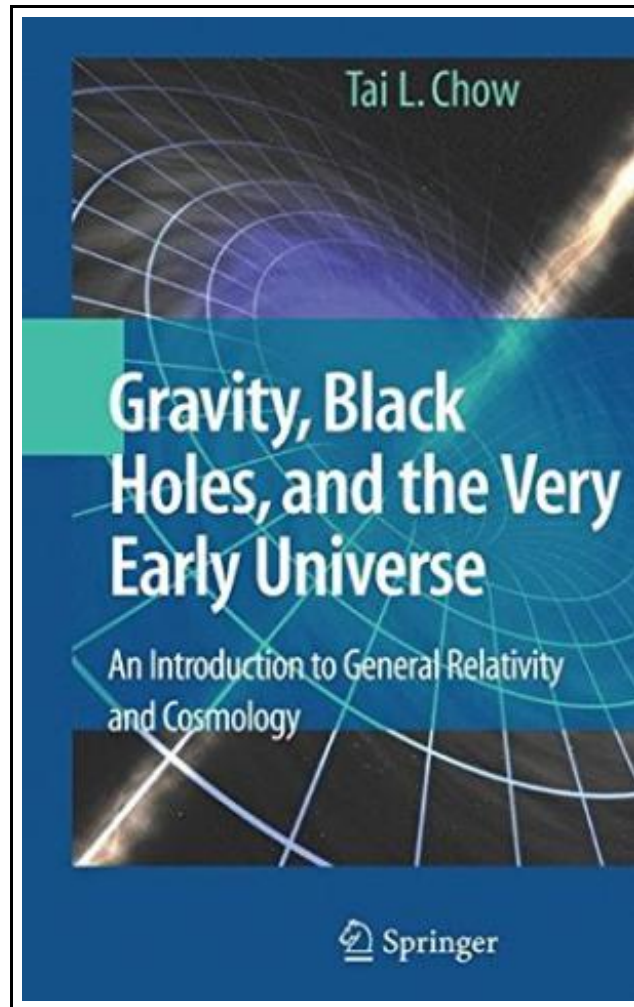


## Gravity, Black Holes, and the Very Early Universe: An Introduction to General Relativity and Cosmology



Filesize: 3.01 MB

### ***Reviews***

*This ebook is great. It typically will not expense a lot of. You will not sense monotony at at any moment of your own time (that's what catalogs are for about when you question me).  
(Shaniya Torphy PhD)*

## GRAVITY, BLACK HOLES, AND THE VERY EARLY UNIVERSE: AN INTRODUCTION TO GENERAL RELATIVITY AND COSMOLOGY

DOWNLOAD



Springer, 2007. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: PrefaceChapter 1 Basic Ideas of General Relativity1.1 Inadequacy of special relativity and Mach's principle1.2 Einstein's principle of equivalence1.3 Immediate consequences of the principle of equivalenceThe bending of a light beamGravitational shift of spectral lines1.4 The curved spacetime concept1.5 The principle of general covariance1.6 Distance and time intervalsReferencesProblemsChapter 2 Curvilinear Coordinates and General Tensors2.1 Curvilinear coordinates2.2 Parallel displacement and covariant differentiation2.3 Symmetry properties of the Christoffel symbols2.4 Christoffel symbols and the metric tensor2.5 The Geodesics2.6 The stationary property of geodesics2.7 The curvature tensor2.8 Geodesic deviation2.9 Laws of physics in curved space2.10 The metric tensor and the classical gravitational potential2.11 Some useful calculation aidsReferencesProblemsChapter 3 Einstein's Law of Gravitation3-1 Introduction (summary of general principles)3-2 A heuristic derivation of Einstein's equations3-3 Energy-momentum tensorReferencesProblemsChapter 4 The Schwarzschild Solution4-1 The Schwarzschild metric4-2 The Schwarzschild solution of the vacuum field equationsThe gravitational redshift4-3 Isotropic coordinates4-4 Schwarzschild geodesic4-5 First integrals of the Schwarzschild solutions4-6 Quasiuniform gravitational fieldReferencesProblemsChapter 5 Experimental Tests of Einstein's Theory5-1 Precession of the perihelion of Mercury5-2 Deflection of light rays in a gravitational field5-3 Light retardation (The Shapiro experiment)5-4 Test of gravitational radiation (Hulse-Taylor's measurement of decay of the orbit of the binary pulsar PSR-1913+16)ReferencesProblemsChapter 6 The Physics of Black Holes6-1 The Schwarzschild black holes6-2 Inside a black hole6-3 How a black hole forms6-4 The Kerr-Newmann black holesEnergy extraction from a rotating blackhole: the Penrose processThe area theoremEnergy extraction from two coalescing black holes6-5 Thermodynamics of black holesQuantum mechanics of black holes; Hawking radiation6-6 The detection of black holesa. Detection of stellar-mass black holesb. Supermassive black holes in the centers of galaxiesc. Intermediate-mass black holes6-7 How do electric and gravitational fields get out of black holes?6-8 Black holes and particle PhysicsReferencesProblemsChapter 7 Introduction to Cosmology7-1 Introduction7-2 A little history...



[Read Gravity, Black Holes, and the Very Early Universe: An Introduction to General Relativity and Cosmology Online](#)



[Download PDF Gravity, Black Holes, and the Very Early Universe: An Introduction to General Relativity and Cosmology](#)

## You May Also Like



### **Grandpa Spanielson's Chicken Pox Stories: Story #1: The Octopus (I Can Read Book 2)**

HarperCollins, 2005. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: Foreword by Raph Koster. Introduction. I. EXECUTIVE CONSIDERATIONS. 1. The Market. Do We Enter the Market? Basic Considerations. How...

[Download ePub »](#)



### **Maisy's Christmas Tree**

Candlewick, 2014. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: The final scene of the gang caroling around the tree, complete with paper crowns from British Christmas crackers, is...

[Download ePub »](#)



### **The Web Collection Revealed, Premium Edition: Adobe Dreamweaver CS6, Flash CS6, and Photoshop CS6 (Stay Current with Adobe Creative Cloud)**

Cengage Learning, 2012. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: You can now maximize and integrate the design and development power of Adobe Creative Suite 6 with WEB...

[Download ePub »](#)



### **Star Flights Bedtime Spaceship: Journey Through Space While Drifting Off to Sleep**

CreateSpace Independent Publishing Platform, 2013. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: "Star Flights Bedtime Spaceship" is a charming and fun story with the purpose to help children...

[Download ePub »](#)



### **The Clever Detective Boxed Set (a Fairy Tale Romance): Stories 1, 2 and 3**

Createspace, United States, 2012. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.After six years as a private investigator, Stacey Alexander has the strangest day...

[Download ePub »](#)

**Read Write Inc. Phonics: Set 7 Non-Fiction 3 the Ice and Snow Book**

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. 207 x 86 mm. Language: N/A. Brand New Book. These decodable non-fiction books provide structured practice for children learning to read. Each set of books

[Download ePub »](#)

**Read Write Inc. Phonics: Blue Set 6 Storybook 4 King of the Birds**

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. Tim Archbold (illustrator). 208 x 148 mm. Language: N/A. Brand New Book. These engaging Storybooks provide structured practice for children learning to read the Read

[Download ePub »](#)

**How The People Found A Home-A Choctaw Story, Grade 4 Adventure Book**

McGraw Hill. Soft cover. Book Condition: Brand New. Dust Jacket Condition: No Dust Jacket. Brand New In Softcover Format, How The People Found A Home-A Choctaw Story, Grade 4 Adventure Book. 1-1-3.

[Download ePub »](#)

**Index to the Classified Subject Catalogue of the Buffalo Library; The Whole System Being Adopted from the Classification and Subject Index of Mr. Melvil Dewey, with Some Modifications .**

Rarebooksclub.com, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.This historic book may have numerous typos and missing text. Purchasers can usually

[Download ePub »](#)

**Read Write Inc. Phonics: Grey Set 7 Storybook 3 I Dare You**

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. Tim Archbold (illustrator). 178 x 148 mm. Language: N/A. Brand New Book. These engaging Storybooks provide structured practice for children learning to read the Read

[Download ePub »](#)