

# General Relativity

Robert M. Wald



DOWNLOAD PDF

## General Relativity

By Wald, Robert M.

University Of Chicago Press, 1984. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service!

Summary: PrefaceNotation and ConventionsPART I.

FUNDAMENTALS1. Introduction1.1 Introduction1.2 Space and Time in Prerelativity Physics and in Special Relativity1.3 The Spacetime Metric1.4 General Relativity2. Manifolds and Tensor Fields2.1 Manifolds2.2 Vectors2.3 Tensors; the Metric Tensor2.4 The Abstract Index Notation3. Curvature3.1 Derivative Operators and Parallel Transport3.2 Curvature3.3 Geodesics3.4 Methods for Computing Curvature4. Einstein's Equation4.1 The Geometry of Space in Prerelativity Physics; General and Special Covariance4.2 Special Relativity4.3 General Relativity4.4 Linearized Gravity: The Newtonian Limit and Gravitational Radiation5. Homogeneous, Isotropic Cosmology5.1 Homogeneity and Isotropy5.2 Dynamics of a Homogeneous, Isotropic Universe5.3 The Cosmological Redshift; Horizons5.4 The Evolution of Our Universe6. The Schwarzschild Solution6.1 Derivation of the Schwarzschild Solution6.2 Interior Solutions6.3 Geodesics of Schwarzschild: Gravitation Redshift, Perihelion Precession, Bending of Light, and Time Delay6.4 The Kruskal ExtensionPART II. ADVANCED TOPICS7. Methods for Solving Einstein's Equation7.1 Stationary, Axisymmetric Solutions7.2 Spatially Homogeneous Cosmologies7.3 Algebraically Special Solutions7.4 Methods for Generating Solutions7.5 Perturbations8. Casual Structure8.1 Futures and Pasts: Basic Definitions and Results8.2 Causality Conditions8.3 Domains of Dependence; Global Hyperbolicity9. Singularities9.1 What is a Singularity?9.2 Timelike and Null Geodesic Congruences9.3 Conjugate Points9.4 Existence of Maximum

### Reviews

*Unquestionably, this is the best operate by any article writer. It is really basic but surprises from the 50 % of the ebook. I realized this ebook from my i and dad suggested this ebook to discover.*

-- **Kacie Schroeder**

*This pdf could be well worth a read through, and a lot better than other. It is amongst the most incredible publication i have got read through. I discovered this book from my dad and i recommended this publication to discover.*

-- **Sadye Hill**