

TABLE OF CONTENTS

Part I : Einstein Manifolds and Special Holonomy

Chapter 1. Einstein Manifolds with Zero Ricci Curvature	
S. T. Yau	1
Chapter 2. Hyper-Kähler Manifolds	
Andrew Dancer	15
Chapter 3. Compact Riemannian Manifolds with Exceptional Holonomy	
Dominic Joyce	39
Chapter 4. Kähler-Einstein Manifolds of Positive Scalar Curvature	
Gang Tian	67
Chapter 5. Quaternion-Kähler Geometry	
Simon Salamon	83
Chapter 6: 3-Sasakian Manifolds	
Charles Boyer and Krzysztof Galicki	123

Part II: Towards a General Theory of Einstein Manifolds

Chapter 7: Ricci Flow and Einstein Metrics in Low Dimensions	
Bennett Chow	187
Chapter 8: Rigidity and Compactness of Einstein Metrics	
Peter Petersen	221
Chapter 9: Einstein Deformations of Hyperbolic Metrics	
Olivier Biquard	235
Chapter 10: Four-Dimensional Einstein Manifolds, and Beyond	
Claude LeBrun	247
Chapter 11: Einstein Metrics from Symmetry and Bundle Constructions	
McKenzie Wang	287

Part III: Relativity Revisited

Chapter 12: General Relativity	
K. Tod	329
Chapter 13: The Stability of Minkowski Space-Time	
Demetrios Christodoulou	365
Chapter 14: Einstein-Weyl Geometry	
David Calderbank and Henrik Pedersen	387