
Contents

| | |
|--|-----|
| PREFACE | ix |
| 1 Fresnel's (Dragging) Coefficient as a Challenge to 19th Century Optics of Moving Bodies JOHN STACHEL | 1 |
| 2 Poincaré's Relativistic Theory of Gravitation SHAUL KATZIR | 15 |
| 3 Standing on the Shoulders of a Dwarf: General Relativity—A Triumph of Einstein and Grossmann's Erroneous Entwurf Theory JÜRGEN RENN | 39 |
| 4 Before the Riemann Tensor: The Emergence of Einstein's Double Strategy JÜRGEN RENN | 53 |
| 5 A Conjecture on Einstein, the Independent Reality of Spacetime Coordinate Systems and the Disaster of 1913 JOHN D. NORTON | 67 |
| 6 Einstein and the Principle of General Relativity, 1916–1921 CHRISTOPH LEHNER | 103 |
| 7 Einstein and the Problem of Motion: A Small Clue DANIEL KENNEFICK | 109 |
| 8 A Note on General Relativity, Energy Conservation, and Noether's Theorems KATHERINE BRADING | 125 |
| 9 Weyl vs. Reichenbach on Lichtgeometrie ROBERT RYNASIEWICZ | 137 |

| | |
|--|-----|
| 10 Dingle and de Sitter Against the Metaphysicians, or Two Ways to Keep Modern Cosmology Physical GEORGE GALE | 157 |
| 11 George Gamow and the ‘Factual Approach’ to Relativistic Cosmology HELGE KRAGH | 175 |
| 12 George McVittie, The Uncompromising Empiricist JOSÉ M. SÁNCHEZ-RON | 189 |
| 13 False Vacuum: Early Universe Cosmology and the Development of Inflation CHRIS SMEENK | 223 |
| 14 Hilbert’s “World Equations” and His Vision of a Unified Science U. MAJER AND T. SAUER | 259 |
| 15 Einstein, Kaluza, and the Fifth Dimension DANIELA WÜNSCH | 277 |
| 16 Unified Field Theory: Early History and Interplay Between Mathematics and Physics HUBERT F. M. GOENNER | 303 |
| 17 Is Quantum Gravity Necessary? JAMES MATTINGLY | 327 |
| 18 Einstein in the Daily Press: A Glimpse into the Gehrcke Papers MILENA WAZECK | 339 |
| 19 Syracuse: 1949–1952 JOSHUA GOLDBERG | 357 |
| 20 A Biased and Personal Description of GR at Syracuse University, 1951–1961 E. T. NEWMAN | 373 |