Contents

Introduction: Towards A Theory of Spacetime Theories .................. 1
Dennis Lehmkuhl

Inertial Motion, Explanation, and the Foundations of Classical
Spacetime Theories ......................................................... 13
James Owen Weatherall

A Primer on Energy Conditions ......................................... 43
Erik Curiel

Background Independence, Diffeomorphism Invariance
and the Meaning of Coordinates ................................. 105
Oliver Pooley

Gauge Theory of Gravity and Spacetime ............................... 145
Friedrich W Hehl

Paving the Way for Transitions—A Case for Weyl Geometry ....... 171
Erhard Scholz

A Model-Theoretic Analysis of Space-Time Theories ............... 225
Claus Beisbart

The Relativity and Equivalence Principles
for Self-gravitating Systems .......................................... 257
David Wallace

The Physical Significance of Symmetries from the Perspective
of Conservation Laws ............................................... 267
Adán Sus
Does Time Exist in Quantum Gravity? .......................... 287
Claus Kiefer

Raiders of the Lost Spacetime .................................. 297
Christian Wüthrich
Towards a Theory of Spacetime Theories
Lehmkuhl, D.; Schiemann, G.; Scholz, E. (Eds.)
2017, VIII, 335 p. 7 illus., Hardcover
A product of Birkhäuser Basel