

1. Record Nr.	UNINA9910784761203321
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Titolo	Symmetry, structure, and spacetime [[electronic resource]]
Pubbl/distr/stampa	Amsterdam, : Elsevier Science Pub, 2008
ISBN	1-281-04745-7 9786611047450 0-08-055206-4
Descrizione fisica	1 online resource (243 p.)
Collana	Philosophy and foundations of physics, v.3
Classificazione	33.21 33.02
Disciplina	530.1
Soggetti	Symmetry (Physics) Conservation laws (Physics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Cover; Preface; Acknowledgements; Contents; Chapter 1. Interpretation and Formalism; 1.1 Interpretation and ontology; 1.2 Symmetry and structure; 1.3 Permutation symmetry and possibility; 1.4 A very brief primer on classical and quantum systems; Chapter 2. Space and Time in the Leibniz-Clarke Debate; 2.1 Substantivalism versus relationalism; 2.2 Inflation versus deflation; 2.3 Leibniz versus Clarke; 2.4 Sophisticated substantivalism and unsophisticated relationalism; 2.5 Looking ahead to the modern debate; Chapter 3. The Interpretation of Gauge Symmetries; 3.1 Maxwellian electromagnetism 3.2 Aspects of gauge theories 3.3 Interpretive problems of gauge theories; 3.4 Why gauge?; Chapter 4. Spacetime in General Relativity; 4.1 Manifold substantivalism; 4.2 Models and worlds; 4.3 The hole argument: The view from gauge theory; Chapter 5. Responding to the Hole Problem; 5.1 Troubles with determinism; 5.2 The modalist turn; 5.3 Varieties of relationalism; Chapter 6. What Is an Observable in General Relativity?; 6.1 Defining observables; 6.2 What is the significance of relational localization?; Chapter 7. Time, Change, and Gauge; 7.1 Holes and gauge: A brief recap 7.2 What is the problem of time? 7.3 A snapshot of the philosophical debate; 7.4 Catalogue of responses; 7.5 Enter structuralism; 7.6

Quantum gravity and spacetime ontology; Chapter 8. Symmetry and Ontology; 8.1 To reduce or not reduce?; 8.2 Geometric mechanics and possibility spaces; 8.3 Four views on reduction; Chapter 9. Structuralism and Symmetry; 9.1 Three types of structuralism; 9.2 To take objects or to leave them?; 9.3 Surplus, semantic universalism and minimal structuralism; 9.4 Minimal structuralism is not constructive empiricism; References; Subject Index

Sommario/riassunto

In this book Rickles considers several interpretative difficulties raised by gauge-type symmetries (those that correspond to no change in physical state). The ubiquity of such symmetries in modern physics renders them an urgent topic in philosophy of physics. Rickles focuses on spacetime physics, and in particular classical and quantum general relativity. Here the problems posed are at their most pathological, involving the apparent disappearance of spacetime! Rickles argues that both traditional ontological positions should be replaced by a structuralist account according to which relational
