

Contents

<i>List of Contributors</i>	<i>page vii</i>
Introduction JAMES READ AND NICHOLAS J. TEH	1
1 The Noether Theorems in Context YVETTE KOSMANN-SCHWARZBACH	4
2 Felix Klein and Emmy Noether on Invariant Theory and Variational Principles DAVID E. ROWE	25
3 Moscow, Oxford, or Princeton: Emmy Noether's Move from Göttingen (1933) TOMOKO L. KITAGAWA	52
4 Getting to the Bottom of Noether's Theorem JOHN C. BAEZ	66
5 BV Quantisation in Perturbative Algebraic QFT: Fundamental Concepts and Perspectives KASIA REJZNER	100
6 Divergence Invariant Variational Problems PETER J. OLVER	134
7 Do Symmetries 'Explain' Conservation Laws? The Modern Converse Noether Theorem vs Pragmatism HARVEY R. BROWN	144
8 Noether's First Theorem and the Energy-Momentum Tensor Ambiguity Problem MARK ROBERT BAKER, NIELS LINNEMANN, AND CHRIS SMEENK	169

vi	<i>Contents</i>	
9	Noether's Theorems and Energy in General Relativity SEBASTIAN DE HARO	197
10	Geometric Objects and Perspectivalism JAMES READ	257
11	Substantive General Covariance and the Einstein–Klein Dispute: A Noetherian Approach LAURENT FREIDEL AND NICHOLAS J. TEH	274
12	Noether Charges, Gauge-Invariance, and Non-Separability HENRIQUE GOMES	296
13	Observability, Redundancy, and Modality for Dynamical Symmetry Transformations DAVID WALLACE	322
14	The Gauge Argument: A Noether Reason HENRIQUE GOMES, BRYAN W. ROBERTS, AND JEREMY BUTTERFIELD	354
	<i>Index</i>	377