
Contents

| | |
|---|-----|
| 1 Introduction | 1 |
| 2 Local Counterterms on the Noncommutative Minkowski Space | |
| <i>Dorothea Bahns</i> | 11 |
| 3 Massless Scalar Field in a Two-dimensional de Sitter Universe | |
| <i>Marco Bertola, Francesco Corbetta, Ugo Moschella</i> | 27 |
| 4 Locally Covariant Quantum Field Theories | |
| <i>Romeo Brunetti</i> | 39 |
| 5 Asymptotic Abelianness and Braided Tensor C^*-Categories | |
| <i>Detlev Buchholz, Sergio Doplicher, Giovanni Morchio, John E. Roberts and Franco Strocchi</i> | 49 |
| 6 Yang–Mills and Some Related Algebras | |
| <i>Alain Connes and Michel Dubois-Violette</i> | 65 |
| 7 Remarks on the Anti-de Sitter Space-Time | |
| <i>Henri Epstein</i> | 79 |
| 8 Quantum Energy Inequalities and Stability Conditions in Quantum Field Theory | |
| <i>Christopher J. Fewster</i> | 95 |
| 9 Action Ward Identity and the Stückelberg–Petermann Renormalization Group | |
| <i>Michael Dütsch, Klaus Fredenhagen</i> | 113 |
| 10 On the Relativistic KMS Condition for the $P(\phi)_2$ Model | |
| <i>Christian Gérard, Christian D. Jäkel</i> | 125 |

VI Contents

| | |
|--|-----|
| 11 The Analyticity Program in Axiomatic Quantum Field Theory <i>Daniel Iagolnitzer</i> | 141 |
| 12 Renormalization Theory Based on Flow Equations <i>Christoph Kopper</i> | 161 |
| 13 Towards the Construction of Quantum Field Theories from a Factorizing S-Matrix <i>Gandalf Lechner</i> | 175 |
| 14 String-Localized Covariant Quantum Fields <i>Jens Mund</i> | 199 |
| 15 Quantum Anosov Systems <i>Heide Narnhofer</i> | 213 |
| 16 DFR Perturbative Quantum Field Theory on Quantum Space Time, and Wick Reduction <i>Gherardo Piacitelli</i> | 225 |
| 17 On Local Boundary CFT and Non-Local CFT on the Boundary <i>Karl-Henning Rehren</i> | 239 |
| 18 Algebraic Holography in Asymptotically Simple, Asymptotically AdS Space-times <i>Pedro Lauridsen Ribeiro</i> | 253 |
| 19 Non-Commutative Renormalization <i>Vincent Rivasseau and Fabien Vignes-Tourneret</i> | 271 |
| 20 New Constructions in Local Quantum Physics <i>Bert Schroer</i> | 283 |
| 21 Physical Fields in QED <i>Othmar Steinmann</i> | 301 |
| 22 Complex Angular Momentum Analysis and Diagonalization of the Bethe–Salpeter Structure in Axiomatic Quantum Field Theory <i>Giovanni Alberto Viano</i> | 311 |