Contents

The Variable Discrete Asymptotics in Pseudo-Differential Boundary Value Problems I **9**
B.-W. Schulze
Preface 9
1 The Variable Discrete Asymptotics 13
2 Green Boundary Symbols 28
3 Smoothing Mellin Boundary Symbols 48
4 Boundary Symbols 66
5 Sobolev Spaces with Variable Discrete Asymptotics 77
References 92

Boundary Value Problems in Boutet de Monvel's Algebra for Manifolds with Conical Singularities I **97**
E. Schrohe and B.-W. Schulze
Introduction 98
1 Manifolds with Conical Singularities 101
2 A Short Description of Boutet de Monvel's Algebra with and without Parameters 108
3 Weighted Sobolev Spaces with Asymptotics 138
4 Mellin Symbols with Values in Boutet de Monvel's Algebra 164
5 Appendix 193
References 208

A Characterization of the Uniform Transmission Property for Pseudodifferential Operators **210**
E. Schrohe
Introduction ... 210
1 Notation. Pseudodifferential Operators and the Transmission Property. Singular Green Operators and Wedge Sobolev Spaces ... 212
2 Boundedness of Pseudodifferential Operators on Sobolev Spaces and the Uniform Transmission Property ... 219
3 Characterization of the Pseudodifferential Operators with the Transmission Property ... 224
References ... 232

Submultiplicativity of Boutet de Monvel's Algebra for Boundary Value Problems **235**
B. Gramsch and E. Schrohe
Introduction ... 235
1 Pseudodifferential Operators, the Transmission Property, Singular Green Operators, and Wedge Sobolev Spaces ... 238
2 Submultiplicativity of Boutet de Monvel's Algebra on the Half-Space . 241
3 Boutet de Monvel's Algebra on a Compact Manifold ... 246
4 Some Remarks on the Case of the Full Algebra ... 255
References ... 256

A Singular Elliptic Estimate and Applications **259**
M. Lesch
1 Introduction ... 259
2 A Comparison Principle for the Heat Kernel ... 261
3 The Singular Elliptic Estimate ... 269
4 Examples ... 270
References ... 276

Reduction and Eigenstates in Deformation Quantization **277**
B. V. Fedosov
1 Introduction ... 277
2 Quantization of Fibering Space ... 279
3 Construction of Reduced Algebra ... 285
4 Eigenstates and Traces ... 291
References ... 296

On the Spectral Theory of the Schrödinger Operator with Electromagnetic Potential **298**

A. Mohamed and G. D. Raikov

1 Introduction 298
2 General Spectral Properties of the Schrödinger Operator with Electromagnetic Potential 302
3 The Essential Spectrum of the Operator $H(A, V)$ 326
4 Asymptotic Behaviour of the Eigenvalues of the Operator $H(A, V)$ near Their Accumulation Points 336
5 Spectral Asymptotics for the Operator $H_{h,\mu,g}$ Corresponding to the Characteristic Behaviour of the Parameters h, μ and g 362
References 383

List of Authors **391**