

## CONTENTS

Preface	v
<b>Part A. Statistics of Quasiparticles</b>	
Anyons and intermediate statistics <i>J. M. Leinaas</i>	3
Field quantization and parastatistics <i>Y. Ohnuki</i>	27
Symmetrization of arbitrary states <i>R. Dirl and B. L. Davies</i>	43
Lie superalgebras: Their representations and an application to a supersymmetric quantum spin chain model <i>R. C. King</i>	55
Hecke algebras: Their representations and an application to a supersymmetric quantum spin chain model <i>R. C. King</i>	67
Symmetric functions and their applications to problems in physics <i>B. G. Wybourne</i>	79
Quantum mechanical observables and positive operator valued measures <i>W. M. de Muynck and H. Martens</i>	101
Symmetry breaking in antiferromagnetic systems <i>W. J. Caspers and P. L. Iske</i>	121
Resonating valence bonds and the Heisenberg model <i>P. L. Iske</i>	137
Extended Heisenberg models <i>P. L. Iske</i>	163
Symmetry-dependent effective fields <i>G. Kamieniarz and R. Dekeyser</i>	181

Symmetric groups and organic ferromagnets <i>J. Karwowski</i>	191
Symmetry properties of the Hubbard model and some of its solutions <i>J. Morkowski</i>	203
Multielectron states in crystals and molecules and the duality of Weyl <i>T. Lulek and S. Walcerz</i>	213
Chaos and order in nonlinear optical processes <i>P. Szlachetka and K. Grygiel</i>	221
Clustering matter as ensemble of quasiparticles <i>A. A. Shanenko, E. P. Yukalova and V. I. Yukalov</i>	237
The plasmon in the one component plasma <i>M. Broidioi and A. Verbeure</i>	269
Frustrated antiferromagnets (Summary) <i>J. T. Chalker</i>	277
<b>Part B. Topological Invariants</b>	
Anderson localisation and the integer quantum Hall effect <i>J. T. Chalker</i>	281
Periodic two dimensional electron systems in magnetic fields: Topological quantum numbers and edge states <i>P. Štředa</i>	291
Berry phase: Geometrical and topological aspects <i>M. Szopa</i>	307
Periodicity of space group irreps <i>R. Dirl and B. L. Davies</i>	315
The geometrical approach to the disordered material properties modeling (thin-film model) <i>Y. M. Kritchevets, S. N. Dubovik and A. A. Kartyshev</i>	333
Random matrix products and the theory of localisation (Summary) <i>J. T. Chalker</i>	339

**Part C. Self-similar Structures**

An introduction to theta functions, braids, knots, Riemann surfaces and their applications <i>J. Moźrzymas</i>	343
Finite space groups revisited <i>R. Dirl and B. L. Davies</i>	371
Symmetries of finite lattices. An application of Mac Lane method <i>W. Florek, D. Lipiński and T. Lulek</i>	389
Extensions of $C_{12}$ cyclic group by Mac Lane method <i>A. Wal and T. Lulek</i>	401
Peierls instabilities in polyacene <i>M. Kuźma</i>	407
Clifford algebra and the Euclidean group <i>S. L. Altmann</i>	413
The relativistic effective operator technique revisited. Part I. Theory <i>R. Chatterjee and H. A. Buckmaster</i>	421
The relativistic effective operator technique revisited. Part II. Applications <i>R. Chatterjee and H. A. Buckmaster</i>	425
Jordan classification of endomorphisms of finite lattices <i>T. Lulek and D. Lipiński</i>	431
Introduction to quantum algebras <i>M. R. Kibler</i>	445
Root lattices, Voronoi cells, and quasicrystals: A survey <i>J. P. Gazeau</i>	465
Lecturers and Participants	487