Contents

A Microscopic Theory of Magnetic Order in Strongly Correlated Quantum Spin Lattices
R.F. Bishop and D. J.J. Farnell 1

Translationally Invariant Coupled Cluster Method in Finite Nuclei
R. Guardiola, I. Moliner, J. Navarro and M. Portesi 25

Many-Body Theory of Electron Gas, Quantum Dots and Metal Clusters
E. Lipparini 43

Electrons in Mesoscopic Systems
J. Martorell 75

Microscopic Calculations on Normal Helium-3 at Zero Temperature
S. Fantoni ***and*** *S. Moroni* 87

Quantum Transport in Strongly Correlated Systems
R. Malfliet 115

Stochastic Approaches to Out-of-Equilibrium Dynamics
Ph. Chomaz 133

Symmetries in Nuclear Models
P. Van Isacker 167

Many-Body Approximations to Nuclear Structure Problems
J.L. Egido 183

Monte-Carlo Shell-Model Calculations
T. Otsuka, T. Mizusaki and M. Honma 201

The Dyson Equation Approach to Many-Body Green's Functions
P. Schuck, J. Dukelsky and G. Röpke 223

Relativistic Thomas-Fermi Description of Collective Modes in Droplets of Nuclear Matter
C. da Providencia, L. Brito, J. da Providencia, M. Nielsen and X. Viñas 269

Quasiparticles and Collective Excitations in the Quark-Gluon Plasma
J.P. Blaizot 299

Nonperturbative Study of Hadron Structure Using Lattice QCD
J.W. Negele 325

List of Participants 347