

Contents

Bernhard Kramer and His Contributions to Physics	
<i>Angus MacKinnon</i>	VII

Part I Scaling at the Anderson Transition

Numerical Investigations of Scaling at the Anderson Transition	
<i>Rudolf A. Römer, Michael Schreiber</i>	3
Transfer Matrices and Disordered Systems	
<i>Angus MacKinnon</i>	21
Corrections to Single Parameter Scaling at the Anderson Transition	
<i>Tomi Ohtsuki, Keith Slevin</i>	31
On the Critical Exponent of the Anderson Transition	
<i>Arisato Kawabata</i>	41
Conductance Statistics near the Anderson Transition	
<i>Peter Markoš</i>	53
Frequency Dependent Electrical Transport in the Integer Quantum Hall Effect	
<i>Ludwig Schweitzer</i>	65

Part II Localization and Phase Coherence in Disordered Media

What Do Phase Space Methods Tell Us about Disordered Quantum Systems?	
<i>Gert-Ludwig Ingold, André Wobst, Christian Aulbach, Peter Hänggi</i>	85
Transfer Matrix Studies of Left-Handed Materials	
<i>C.M. Soukoulis and P. Markoš</i>	99
Emission Spectrum of Random Lasers	
<i>Gregor Hackenbroich, Fritz Haake</i>	109

Coherent Random Lasing and ‘Almost Localized’ Photon Modes <i>V.M. Apalkov, M.E. Raikh, B. Shapiro</i>	119
Manifestations of Anderson Localization in Semiconductor Optics <i>Erich Runge, Roland Zimmermann</i>	145
Electron Dynamics in AC-Driven Quantum Dots <i>C.E. Creffield, G. Platero</i>	157
Phonons and Phononic Gaps in Continuous Inhomogeneous Media <i>E.N. Economou, R.S. Penciu</i>	175
Quantum Tunneling of an Acoustic Polaron in One-Dimensional Electron-Lattice System <i>Yoshiyuki Ono, Takashi Ebinuma, Toshiyuki Ozawa</i>	187
Part III Localization and Electron Correlations in Quantum Transport	
Critical Chaotic Spectra of One and Two Interacting Electrons in Quasiperiodic Chains <i>Spiros Evangelou, Dimitris Katsanos, Bernhard Kramer</i>	203
Superconductivity from the Repulsive Electron Interaction – from 1D to 3D <i>Hideo Aoki</i>	219
Quantum Coherence in Low-Dimensional Interacting Fermi Systems <i>Ulrich Eckern, Cosima Schuster</i>	245
Spin Transport Properties of a Quantum Dot <i>Maura Sassetti, Alessandro Braggio, Fabio Cavaliere</i>	259
Andreev-Lifshitz Supersolid for a Few Electrons on Small Periodic Square Lattices <i>Jean-Louis Pichard, Zoltán Ádám Németh</i>	275
Spin Blockades in the Transport through Quantum Dots <i>Dietmar Weinmann</i>	289
Conductance Quasi-quantization of Quantum Point Contacts: Why Tight Binding Models Are Insufficient <i>Stefan Kirchner, Johann Kroha, Peter Wölfle, Elke Scheer</i>	303