

Contents

Preface	ix
Local Inverse Scattering Problem as a Tool of Perturbation Analysis for Resonance Systems V. M. ADAMYAN, G. J. MARTIN, and B. S. PAVLOV	1
The Continuous Theory of Dislocations for a Material Containing Dislocations to One Burgers Vector Only HANS-DIETER ALBER	27
Spectral Problems of High-Order Recurrences A. I. APTEKAREV	43
On the Multifractal Spectrum of the Whole-Plane Lévy–Loewner Evolution ANNE BOUTET DE MONVEL, IGOR LOUTSENKO, and OKSANA YERMOLAYEVA	63
Asymptotic Behavior of Large Eigenvalues of a Modified Jaynes–Cummings Model ANNE BOUTET DE MONVEL and LECH ZIELINSKI	77
Fourier Integrals and a New Representation of Maslov’s Canonical Operator Near Caustics S. YU. DOBROKHOTOV, G. MAKRAKIS, and V. E. NAZAIKINSKII	95
Inverse Uniqueness Results for One-Dimensional Weighted Dirac Operators JONATHAN ECKHARDT, ALEKSEY KOSTENKO, and GERALD TESCHL	117
Spectral Loci of Sturm–Liouville Operators with Polynomial Potentials ALEXANDRE EREMENKO and ANDREI GABRIELOV	135
The Central Limit Theorem for Linear Eigenvalue Statistics of the Sum of Independent Random Matrices of Rank One OLIVIER GUÉDON, ANNA LYTOVA, ALAIN PAJOR, and LEONID PASTUR	145
On the Spectrum of Nonself-Adjoint Zakharov–Shabat Operators on \mathbb{R} T. KAPPELER, P. LOHRMANN, and P. TOPALOV	165
Homogenized Model of Oscillations of Elastic Medium with Small Caverns Filled with Viscous Incompressible Fluid E. YA. KHRUSLOV, M. V. GONCHARENKO, and N. K. RADYAKIN	179

Double Scaling Limit in the Painlevé IV Equation and Asymptotics of the Okamoto Polynomials	
V. YU. NOVOKSHENOV and A. A. SHCHELKONOGOV	199
Recovering a Potential of the Sturm–Liouville Problem from Finite Sets of Spectral Data	
A. M. SAVCHUK and A. A. SHKALIKOV	211
High-Velocity Estimates, Inverse Scattering and Topological Effects	
RICARDO WEDER	225