

Contents

Preface	xi
Introduction	
PETER KUCHMENT AND EVGENY SEMENOV	1
Voronezh Winter Mathematical School	
SELIM KREIN	17
Recollections of Mark Krein	
SELIM KREIN	25
Selim Krein and Voronezh Winter Mathematical Schools	
PETER KUCHMENT AND VLADIMIR LIN	29
A few words about our beloved teacher in mathematics and life	
M. GRABOVSKAYA AND V. KONONENKO	35
Probabilistic interpretations of quasilinear parabolic systems	
YA. BELOPOLSKAYA	39
On sectorial L -systems with Shrödinger operator	
S. BELYI AND E. TSEKANOVSKIĬ	59
The L^p -dissipativity of certain differential and integral operators	
ALBERTO CIALDEA AND VLADIMIR MAZ'YA	77
Probabilistic approach to a cell growth model	
GREGORY DERFEL, YAQIN FENG, AND STANISLAV MOLCHANOV	95
New examples of Hawking radiation from acoustic black holes	
GREGORY ESKIN	107
On multiplicative properties of determinants	
LEONID FRIEDLANDER	123
Spectral properties of the Neumann-Laplace operator in quasiconformal regular domains	
V. GOL'DSHTEIN, V. PCHELINTSEV, AND A. UKHLOV	129
First steps of the global bifurcation theory in the plane	
YU. ILYASHENKO	145
Spectral asymptotics for fractional Laplacians	
VICTOR IVRII	159

Spectral analysis and decomposition of normal operators related with the multi-interval finite Hilbert transform ALEXANDER KATSEVICH, MARCO BERTOLA, AND ALEXANDER TOVBIS	171
Polynomial-like elements in vector spaces with group actions MINH KHA AND VLADIMIR LIN	193
On two hydromechanical problems inspired by works of S. Krein N. D. KOPACHEVSKY, V. I. VOYTITSKY, AND Z. Z. SITSHAYEVA	219
Adjoint discrete systems with properly stated leading terms G. A. KURINA	239
Solution of the initial value problem for the focusing Davey-Stewartson II system E. LAKSHTANOV AND B. VAINBERG	249
Vortex quantization in classical mechanics V. P. MASLOV	267
Elliptic operators with nonstandard growth condition: Some results and open problems ALEXANDER PANKOV	277
Essential spectrum of Schrödinger operators with δ and δ' -interactions on systems of unbounded smooth hypersurfaces in \mathbb{R}^n VLADIMIR RABINOVICH	293