

# Convolution Equations And Singular Integral Operators

[DOWNLOAD HERE](#)

1;Title Page;4 2;Copyright Page;5 3;Table of Contents;6 4;Preface;7 5;Introduction;8 5.1;References;17 6;Inversion of Finite Toeplitz Matrices;22 6.1;1. Inversion of Toeplitz matrices;22 6.2;2. Inverse problem;24 6.3;3. Continual analogue;26 6.4;References;27 7;Inversion of Finite Toeplitz Matrices Consisting of Elements of a Noncommutative Algebra ;28 7.1;1. Theorems on inversion of Toeplitz matrices;28 7.2;2. Properties of solutions of equations;36 7.3;3. Inverse problem;44 7.4;4. Other theorems on inversion of Toeplitz matrices;49 7.5;5. Properties of solutions of equations;58 7.6;6. Inverse problem for equations;62 7.7;References;66 8;Matrix Integral Operators on a Finite Interval with Kernels Depending on the Difference of the Arguments;68 8.1;1. Two lemmas;69 8.2;2. The inversion formula;72 8.2.1;2.1. The main result of this section is the following.;72 8.2.2;2.2. Formula;76 8.3;3. Properties of the solutions of main equations;77 8.4;4. Inverse problem;81 8.5;References;84 9;The Resultant Matrix and its Generalizations. I. The Resultant Operator for Matrix Polynomials;85 9.1;1. Lemma on multiple extensions of systems of vectors;86 9.1.1;1.1.;86 9.1.2;1.2.;87 9.2;2. Auxiliary propositions;93 9.2.1;2.1.;93 9.2.2;2.2.;95 9.2.3;2.3.;97 9.3;3. Main theorem;98 9.3.1;3.1.;98 9.3.2;3.2.;99 9.3.3;3.3.;101 9.4;4. Applications;102 9.4.1;4.1.;102 9.4.2;4.2.;104 9.5;5. Kernel of Bezoutian;105 9.5.1;5.1.;105 9.5.2;5.2.;107 9.6;References;108 10;The Resultant Matrix and its Generalizations. II. The Continual Analogue of the Resultant Operator;109 10.1;1. Formulation of the main theorem;110 10.1.1;1.1.;110 10.1.2;1.2.;111 10.1.3;1.3.;113 10.1.4;1.4.;113 10.1.5;1.5.;114 10.2;2. A lemma;115 10.3;3. Proof of the main theorem;118 10.4;4. Scalar case;121 10.4.1;4.1.;121 10.4.2;4.2.;123 10.5;5. Applications;123 10.5.1;5.1.;123 10.5.2;5.2.;126 10.5.3;5.3.;126 10.6;6. Continual analogue of the Bezoutian;126 10.7;References;128 11;The Spectrum of Singular Integral Operators in  $L_p$  Spaces;130 11.1;1. The spectrum of discrete Wiener-Hopf equations in  $h_p$  spaces;131 11.1.1;1.1.;131 11.1.2;1.2.;131 11.1.3;1.3.;132 11.2;2. The spectrum of singular integral operators in  $L_p$  spaces;133 11.3;3. Estimate for the norm of the singular integral operator;139 11.4;4. The spectrum of singular integral operators in symmetric spaces;141 11.5;References;143 12;On an Algebra Generated by the Toeplitz Matrices in the Spaces  $h_p$ ;145 12.1;1. Toeplitz operators in the spaces  $h_p$ ;146 12.1.1;1.1.;146 12.1.2;1.2.;147 12.2;2.

Algebra generated by the Toeplitz operators;148 12.2.1;2.1.;148 12.2.2;2.2.;150 12.3;References;151  
 13;On Singular Integral Equations with Unbounded Coefficients;152 13.1;1. Auxiliary propositions;153  
 13.2;2. On the boundedness of the operator of singular integration;155 13.3;3. Operators of the form;157  
 13.4;4. Operators of the form;159 13.5;References;161 14;Singular Integral Equations with Continuous  
 Coefficients on a Composed Contour;162 14.1;1. Auxiliary propositions and theorems on solvability;164  
 14.2;2. Quotient algebra;169 14.3;3. Normal solvability and index of operators in the algebra;171  
 14.4;References;173 15;On a Local Principle and Algebras Generated by Toeplitz Matrices;174 15.1;1.  
 Localizing classes;175 15.1.1;1.1.;175 15.1.2;1.2.;175 15.1.3;1.3.;176 15.2;2. First example;177  
 15.2.1;2.1.;177 15.2.2;2.2.;178 15.3;3. Some properties of operators generated by Toeplitz matrices in  $l_p$   
 spaces ;179 15.3.1;3.1.;179 15.3.2;3.2.;180 15.3.3;3.3.;181 15.3.4;3.4.;182 15.4;4. Second example and  
 its applications;183 15.4.1;4.1.;183 15.4.2;4.2.;184 15.5;5. Inversion of Toeplitz matrices;186  
 15.5.1;5.1.;186 15.5.2;5.2.;188 15.5.3;5.3.;191 15.6;6. Algebra of operators with Fredholm symbol;192  
 15.7;7. Algebras generated by paired operators;195 15.7.1;7.1.;195 15.7.2;7.2.;198 15.8;References;199  
 16;The Symbol of Singular Integral Operators on EAN/ISBN : 9783764389567 Publisher(s): Springer,  
 Berlin, Birkhuser Format: ePub/PDF Author(s): Lerer, Leonid - Olshevsky, Vadim - Spitkovsky, Ilya M. -  
 Karlovych, Oleksiy

[DOWNLOAD HERE](#)

Similar manuals: