

# Contents

<b>Foreword</b>	<b>vii</b>
<b>Chapter 1. Nonstandard Theory of Vector Lattices</b> (A. G. Kusraev and S. S. Kutateladze)	
1. Vector Lattices .....	4
2. Boolean-Valued Models .....	16
3. Real Numbers in Boolean-Valued Models .....	31
4. Boolean-Valued Analysis of Vector Lattices .....	46
5. Fragments of Positive Operators .....	59
6. Lattice-Normed Spaces .....	71
Comments .....	91
References .....	99
<b>Chapter 2. Operator Classes Determined by Order Conditions</b> (A. V. Bukhvalov)	
1. Ideal Spaces .....	109
2. The Space of Regular Operators .....	117
3. Spaces of Vector-Functions .....	132
4. Dominated Operators .....	139
Comments .....	149
References .....	153
<b>Chapter 3. Stably Dominated and Stably Regular Operators</b> (B. M. Makarov)	
1. $p$ -Absolutely Summing Operators .....	159
2. $p$ -Absolutely Summing Operators in Hilbert Space .....	168
3. Nuclear Operators .....	172
4. Stably Dominated Operators .....	182
5. Coincidence of Some Classes of Operators in the Scale of the Banach Spaces $L^p$ .....	209

6. Nikishin-Maurey Factorization Theorems .....	215
7. Stably Regular Operators .....	225
8. Certain Operator Lattices .....	230
9. Operator Spaces and Local Unconditional Structure .....	242
S. Supplement to Chapter 3 .....	263
Comments .....	273
References .....	275
<b>Chapter 4. Integral Operators (A. V. Bukhvalov, V. B. Korotkov, and B. M. Makarov)</b>	
1. Basic Properties of Integral Operators .....	281
2. Integral Representation of Linear Operators .....	288
3. Applications of the Criterion for Integral Representability .....	301
4. Linear Operators and Vector Measures .....	303
5. Integral Representation of Nonlinear Operators .....	305
6. Algebraic Properties of Integral Operators .....	308
7. Universal Integral Operators and Operators with Integral Commutators .....	319
Comments .....	339
References .....	341
S. Supplement to Chapter 4. Integral Operators of Convolution (V. D. Stepanov) .....	347
References .....	357
<b>Chapter 5. Disjointness Preserving Operators (A. E. Gutman)</b>	
1. Prerequisites .....	361
2. Order Approximating Sets .....	368
3. Order Bounded Operators .....	378
4. The Shadow of an Operator .....	389
5. Orthomorphisms .....	398
6. Shift Operators .....	409
7. Weighted Shift Operator .....	420
8. Representation of Disjointness Preserving Operators .....	430
9. Interpretation for the Properties of Operators .....	437
Comments .....	446
References .....	451
<b>Index</b>	<b>455</b>