

Introduction to Banach Algebras, Operators, and Harmonic Analysis

H. GARTH DALES, PIETRO AIENA,
JÖRG ESCHMEIER,
KJELD LAURSEN
& GEORGE WILLIS

London Mathematical Society
Student Texts **57**

Contents

	<i>Preface</i>	page vii
Part I	Banach algebras <i>H. Garth Dales</i>	1
1	Definitions and examples	3
2	Ideals and the spectrum	12
3	Gelfand theory	20
4	The functional calculus	30
5	Automatic continuity of homomorphisms	38
6	Modules and derivatives	48
7	Cohomology	58
Part II	Harmonic analysis and amenability <i>George A. Willis</i>	73
8	Locally compact groups	75
9	Group algebras and representations	86
10	Convolution operators	98
11	Amenable groups	109
12	Harmonic analysis and automatic continuity	121
Part III	Invariant subspaces <i>Jörg Eschmeier</i>	135
13	Compact operators	137
14	Unitary dilations and the H^∞ -functional class	143
15	Hyperinvariant subspaces	154
16	Invariant subspaces for contractions	160
17	Invariant subspaces for subnormal operators	166
18	Invariant subspaces for subdecomposable operators	171
19	Reflexivity of operator algebras	178
20	Invariant subspaces for commuting contractions	186
	Appendix to Part III	193
Part IV	Local spectral theory <i>Kjeld Bagger Laursen</i>	199
21	Basic notions from operator theory	201
22	Classes of decomposable operators	212

23	Duality theory	226
24	Preservation of spectra and index	230
25	Multipliers on commutative Banach algebras	241
	Appendix to Part IV	254
Part V	Single-valued extension property and Fredholm	
	<i>theory Pietro Aiena</i>	265
26	Semi-regular operators	267
27	The single-valued extension property	285
28	SVEP for semi-Fredholm operators	298
	<i>Index of symbols</i>	319
	<i>Subject index</i>	321