

Contents

<i>Preface</i>	<i>page vii</i>
1 Operators and Hardy spaces	1
1.1 Banach spaces and bounded operators	1
1.2 Hardy spaces on the disc and half-plane	4
1.3 Inner and outer functions	8
1.4 Vector-valued Hardy spaces	13
2 Closed operators	17
2.1 The graph of an operator	17
2.2 Semigroups	22
2.3 The gap metric	30
3 Shift-invariance and causality	37
3.1 Invariant subspaces	37
3.2 Invariant operators	44
3.4 Causality	49
3.4 The commutant lifting theorem	53
4 Stability and stabilization	63
4.1 Stability theory	63
4.2 Robustness	72
4.3 The chordal metric	81
5 Spaces of persistent signals	89
5.1 Almost-periodic functions	89
5.2 Power signal spaces	105
5.3 Spectral distribution functions	109

6 Delay systems	121
6.1 Background and classification	121
6.2 Stability	129
6.3 Rational approximation	134
6.4 Stabilization	144
<i>Bibliography</i>	151
<i>Index</i>	162