

Contents

0.1	Introduction	iii
0.2	Notation, and some convergence results	iv
0.3	Summary	vii
0.3.1	Chapter 1	vii
0.3.2	Chapter 2	x
0.3.3	Chapter 3	xi
0.4	A matter of contrast	xv
0.5	Acknowledgements	xv
1	Some results on weak compactness	1
1.1	Introduction	1
1.2	Definitions	2
1.3	Basic results	3
1.3.1	Continuous images	3
1.3.2	$(R)\Psi K$	5
1.3.3	$(R)CK$	6
1.3.4	$w\text{-(}R\text{)}\Xi K$	12
1.3.5	$w\text{-(}R\text{)}\partial K$	15
1.3.6	Hierarchy	16
1.3.7	Separation (and some negative results)	18
1.4	Two cornerstones in weak compactness	22
1.5	Interchange of limits	32
1.6	Web-compact spaces	34
1.7	Supremum-attaining functionals	41
1.8	$(R)SK$, $(R)NK$, $(R)K$	42
1.9	Reflexivity	46
1.10	Completeness	48

Contents

2 On Banach disks	49
2.1 Introduction	49
2.2 Separability	54
2.3 Reflexivity	56
2.4 On local convergence	63
3 Drop property	67
3.1 Introduction	67
3.2 Results	69
3.2.1 Definitions	69
3.2.2 Drop property for bounded subsets of a locally convex space	70
3.2.3 Drop property for unbounded subsets of a locally convex space	78
3.3 Property (α)	81
3.4 Condition (β)	96
4 Appendix	101
4.1 Some open problems	101
4.2 Further developments	102
Bibliography	109