

Contents

<i>Introduction</i>	9
<i>Logical connections between sections</i>	12
<i>Notations and Terminology</i>	13
1. Set theory	13
2. Order relations	13
3. Topological spaces	14
4. Uniform spaces	14

Chapter 1: Topological preliminaries

§ 1.1 Sets of filters	17
§ 1.2 Sets of filters on topological and uniform spaces	19
§ 1.3 Φ -continuous and uniformly Φ -continuous maps	22
§ 1.4 Filters defined by sets of sequences	25
§ 1.5 Sets of sequences on topological and uniform spaces	31
§ 1.6 δ -stable filters	42
§ 1.7 Mioritic spaces	43
§ 1.8 Φ_i -continuous and uniformly Φ_i -continuous maps	46

Chapter 2: Spaces of functions

§ 2.1 Uniformities on spaces of functions	53
§ 2.2 Uniformities on spaces of functions defined by sets of sequences	67
§ 2.3 Šmulian spaces	75
§ 2.4 Constructions with spaces of functions	85
§ 2.5 Spaces of parametrized functions	87

Chapter 3: Spaces of supersummable families

§ 3.1 The set $\mathcal{G}(I, G)$	91
§ 3.2 Structures on $\mathcal{G}(I, G)$	95
§ 3.3 Spaces of supersummable families	102
§ 3.4 Spaces of supersummable families of functions	123
§ 3.5 Supersummable families in special spaces	130

Chapter 4: Spaces of measures

§ 4.1	Measures and exhaustive maps	155
§ 4.2	Spaces of measures and of exhaustive additive maps	186
§ 4.3	Vitali-Hahn-Saks theorem and Phillips lemma	199
§ 4.4	Weak topologies on spaces of measures	210
§ 4.5	Spaces of measures on topological spaces	223
§ 4.6	Measures with parameter	240
§ 4.7	Bounded sets	244
§ 4.8	Bounded sets and measures on topological spaces	255
§ 4.9	Spaces of integrals	263
§ 4.10	Supersummable families of functions and their integrals	273
§ 4.11	Measurability considerations	280

Chapter 5: Locally convex lattices

§ 5.1	Order summable families	289
§ 5.2	Order continuous maps	304
§ 5.3	Spaces of order continuous group homomorphisms	315
§ 5.4	Vector lattices	321
§ 5.5	Duals of vector lattices	325
§ 5.6	Spaces of vector valued measures	341
§ 5.7	Quasi M -spaces	361
§ 5.8	M -spaces	386
§ 5.9	Strict M -spaces	405

<i>References</i>	429
-------------------	-----

<i>Index</i>	439
--------------	-----

<i>Notations</i>	443
------------------	-----