

# TABLE OF CONTENTS

## Introduction

### Part I

§ 1. Preliminaries .....	1
§ 2. The language $L_t$ .....	5
§ 3. Beginning topological model theory .....	7
§ 4. Ehrenfeucht-Fraïssé theorem .....	12
§ 5. Interpolation and preservation .....	25
§ 6. Products and sums .....	31
§ 7. Definability .....	38
§ 8. Lindström's theorem and related logics .....	48
§ 9. Omitting types theorem .....	61
§ 10. $(L_{w_1 w_t})_t$ .....	65
Historical remarks .....	75
References .....	76

### Part II

§ 1. Topological spaces .....	78
A Separation axioms .....	78
B The decidability of the theory of $T_3$ -spaces .....	88
C The elementary types of $T_3$ -spaces .....	95
D Finitely axiomatizable and $\aleph_0$ -categorical $T_3$ -spaces ....	103
§ 2. Topological abelian groups .....	113
§ 3. Topological fields .....	120
A Characterization of topological fields .....	120
B Valued and ordered fields .....	123
C Real and complex numbers .....	127
§ 4. Topological vector spaces .....	129
A Locally bounded real vector spaces .....	130
B Locally bounded real vector spaces with a distinguished subspace .....	134

C Banach spaces with linear mappings .....	139
D Dual pairs of normed spaces .....	140
Historical remarks .....	145
References .....	146
Subject index .....	148
Index of symbols .....	150
Errata .....	151