

## Table of Contents

<b>Preface .....</b>	<b>IX</b>
<b>1. The Basics .....</b>	<b>1</b>
1.1 Preliminaries and Notation .....	1
1.1.1 Elimination of Quantifiers .....	6
<b>2. Constructing Models with Special Properties .....</b>	<b>11</b>
2.1 Prime and Atomic Models .....	11
2.2 Saturated and Homogeneous Models .....	17
2.3 Countable Models of Complete Theories .....	35
2.4 Indiscernible Sequences .....	40
2.5 Skolem Functions .....	43
<b>3. Uncountably Categorical and <math>\aleph_0</math>-stable Theories .....</b>	<b>49</b>
3.1 Morley's Categoricity Theorem .....	49
3.2 A Universal Domain .....	70
3.3 Totally Transcendental Theories .....	72
3.4 The Baldwin-Lachlan Theorem .....	92
3.5 Introduction to $\omega$ -stable Groups .....	100
3.5.1 A Group Acting on a Strongly Minimal Set .....	114
3.5.2 $\lambda$ -definable Groups and Actions .....	121
<b>4. Fine Structure of Uncountably Categorical Theories .....</b>	<b>125</b>
4.1 $T^{eq}$ .....	126
4.1.1 Totally Transcendental Theories Revisited .....	131
4.1.2 $D^{eq}$ for a Strongly Minimal $D$ .....	136
4.2 The Pregeometries on Strongly Minimal Sets .....	138
4.2.1 Plane Curves .....	143
4.3 Global Geometrical Considerations .....	150
4.3.1 1-based Theories .....	159
4.3.2 1-based Groups .....	164
4.4 Automorphism Groups of Constructions .....	175
4.5 Defining a Group from a Pregeometry .....	192
4.5.1 Germs of Definable Functions .....	194
4.5.2 Getting a Group from an Algebraic Quadrangle .....	204

## VIII Table of Contents

<b>5. Stability .....</b>	213
5.1 Stability .....	213
5.1.1 Ranks and Definability .....	213
5.1.2 Stability and the Number of Types .....	228
5.1.3 Morley Sequences and Indiscernibles .....	230
5.1.4 The Fundamental Order .....	233
5.2 The Stability Spectrum and $\kappa(T)$ .....	238
5.3 Stable Groups and Modules .....	242
5.3.1 1-based Groups and Modules .....	249
5.3.2 Modules .....	251
5.4 Saturated Models .....	257
5.4.1 $a$ -models .....	258
5.5 Prime Models .....	261
5.5.1 Prime Models in a t.t. Theory .....	261
5.5.2 $a$ -prime Models .....	267
5.6 Orthogonality, Domination and Weight .....	273
5.6.1 Orthogonality .....	275
5.6.2 Domination .....	280
5.6.3 Weight .....	283
5.6.4 Finite Weight .....	287
<b>6. Superstable Theories .....</b>	293
6.1 More Ranks .....	293
6.2 Geometrical Matters: A Dichotomy Theorem .....	301
6.3 Regular Types .....	304
6.3.1 Rank Considerations .....	311
6.4 Strongly Regular Types .....	314
<b>7. Selected Topics .....</b>	323
7.1 Bounded and Unbounded Theories .....	323
7.1.1 Bounded $\omega$ -stable Theories .....	327
7.1.2 Unbounded Theories .....	335
7.2 More on Ranks .....	337