

CONTENTS

1. Nonstandard analysis on the real line	1
1. Introduction to nonstandard real line	2
2. Development of nonstandard analysis	7
2. Foundations of classical nonstandard analysis	15
3. A model of nonstandard real line	17
4. Nonstandard mathematical structures	25
5. The Loś theorem and Transfer	30
6. Saturation and Loeb measures	36
3. Internal set theory	43
7. Development of internal theories	46
8. Basic theory of IST	54
9. Full Collection and Uniqueness in IST	62
10. Bounded sets in IST	68
11. Truth definition for the class of standard sets in IST ..	71
4. IST and ZFC	79
12. Nelson adequate ultrapower model for IST	82
13. Definable ultrapower model of IST	91
14. Interrelations between internal and standard theories	99
5. Bounded set theory	107
15. Basic theory of BST	109
16. Parametrization of bounded definable classes	117
17. Parametrization of classes of classes	126
18. An experience: the Loeb measure construction	134

References	141
Index	147