
CONTENTS

Preface	ix
Chapter 0. PRELIMINARIES	1
0.1. Representations	1
0.2. Identities and varieties	5
0.3. Certain properties of varieties	14
0.4. Changing the ground ring	19
0.5. The free group algebra	23
Chapter 1. STABLE VARIETIES AND HOMOGENEITY ...	33
1.1. Finiteness properties	34
1.2. Homogeneous varieties	40
1.3. Connections with varieties of associative algebras	48
1.4. Stable varieties of class 4	55
1.5. A stable nonhomogeneous variety	60
1.6. Stability of unipotent varieties	71
Chapter 2. LOCALLY FINITE-DIMENSIONAL VARIETIES	79
2.1. Basic notions and properties	80
2.2. Characterization of locally finite and locally finite-dimensional varieties	84
2.3. The order functions	91
2.4. Critical representations	100
2.5. Critical representations and irreducibility	106

Chapter 3. IDENTITIES OF FINITE AND STABLE-BY-FINITE REPRESENTATIONS	113
3.1. Ordinary representations of finite groups	114
3.2. Several auxiliary results	118
3.3. Bounds for the orders of critical representations	126
3.4. Identities of stable-by-finite representations	134
3.5. Corollaries and related results	139
Chapter 4. FURTHER TOPICS	146
4.1. Multilinear identities and partial linearizations	147
4.2. Identities of representations of abelian groups and related results	155
4.3. Multiplication of pure varieties	164
4.4. Intersection of pure varieties	174
4.5. Some applications: an overview	179
References	189
Index	197