## Contents

HOI ON	LOMOI PRO	RPHIC C* ACTIONS AND VECTOR FIELDS JECTIVE VARIETIES			
	b	y J. B. CARRELL	1		
	1.	C* actions on projective varieties	3		
	2.	The B-B decomposition	7		
	3.	The Homology Basis Theorem	13		
	4.	A generalization of the Homology Basis Theorem	17		
	5.	Holomorphic vector fields and the cohomology ring	22		
	6.	Borel's Theorem and holomorphic vector fields	25		
	7.	Holomorphic vector fields with one zero	29		
	8.	A remark on rationality	31		
	9.	Closing remarks	33		
		References	35		
A DUALITY OPERATION IN THE CHARACTER RING OF A FINITE GROUP OF LIE TYPE					
by C. W. CURTIS					
	1.	Duality in the character ring of a finite Coxeter group	41		

2.	Truncation and Duality in the character ring of a finite group of Lie type	48			
3.	Main theorems on duality	59			
4.	Applications to Springer's Theorem and a conjecture of MacDonald	64			
5.	Some additional results	68			
	References	71			
ARITHMI b; 1. 2. 3. 4.	ETIC GROUPS y J. E. HUMPHREYS Lattices in Lie groups Finite generation and finite presentation Normal subgroups Normal subgroups (continued) References	73 73 80 86 91 97			
MODULAR REPRESENTATIONS OF ALGEBRAIC GROUPS					
1.	Elementary theory	102			
2.	Induced modules	108			
3.	Infinitesimal methods	113			
4.	Rational cohomology	121			
5.	Lusztig's conjecture	127			
	References	131			
ABSTRACT HOMOMORPHISMS OF BIG SUBGROUPS OF ALGEBRAIC GROUPS					

by B. WEISFEILER ..... 135

1.	Motivation	136
2.	Evident restrictions	140
3.	Isotropic semi-simple groups over fields	141
4.	Short remarks on O'Meara's method	147
5.	Tits' results on homomorphisms of Lie groups	149
6.	Rigidity, strong rigidity, and superrigidity of lattices	152
7.	Quotient groups of lattices	163
8.	Lattices in PSO(n,1) and PSU(n,1)	167
9.	Concluding remarks	174
	References	176