

Contents

Preface	vii
Commuting Actions—A Tale of Two Groups GEORGIA BENKART	1
Lie Theory over Commutative Rings and Lifting Invariant Forms BEN COX	47
Polynomial Representations of Frobenius Kernels of GL_2 STEPHEN R. DOTY, DANIEL K. NAKANO, AND KARL M. PETERS	57
Homological Topics in the Representation Theory of Restricted Lie Algebras JÖRG FELDVOSS	69
An Exposition of Generalized Kac-Moody Algebras ELIZABETH JURISICH	121
Root Multiplicities of Graded Lie Algebras SEOK-JIN KANG	161
Similarity of Crystal Bases MASAKI KASHIWARA	177
Some Topics on the Representation Theory of Generalized Kac-Moody Algebras SATOSHI NAITO	187
Complexity and Support Varieties for Finite Dimensional Algebras DANIEL K. NAKANO	201
Quasi-particle Structure in Solvable Vertex Models ATSUSHI NAKAYASHIKI	219