

1. Record Nr.	UNINA9910827764803321
Autore	Benkart Georgia <1949->
Titolo	The recognition theorem for graded Lie algebras in prime characteristic // Georgia Benkart, Thomas Gregory, Alexander Premet
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , 2009 ©2009
ISBN	1-4704-0526-1
Descrizione fisica	1 online resource (164 p.)
Collana	Memoirs of the American Mathematical Society, , 0065-9266 ; ; Volume 197, Number 920
Disciplina	512/.482
Soggetti	Lie algebras
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Volume 197, Number 920 (second of 5 numbers)."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	""Contents""; ""Introduction""; ""Chapter 1. Graded Lie Algebras""; ""1.1. Introduction""; ""1.2. The Weisfeiler radical""; ""1.3. The minimal ideal J""; ""1.4. The graded algebras $B(V[\text{sub}(-t)])$ and $B(V[\text{sub}(t)])$""; ""1.5. The local subalgebra""; ""1.6. General properties of graded Lie algebras""; ""1.7. Restricted Lie algebras""; ""1.8. The main theorem on restrictedness (Theorem 1.63)""; ""1.9. Remarks on restrictedness""; ""1.10. The action of $g[\text{sub}(0)]$ on $g[\text{sub}(-j)]$""; ""1.11. The depth-one case of Theorem 1.63""; ""1.12. Proof of Theorem 1.63 in the depth-one case"" ""2.7. Divided power algebras""""2.8. Witt Lie algebras of Cartan type (the W series)""; ""2.9. Special Lie algebras of Cartan type (the S series)""; ""2.10. Hamiltonian Lie algebras of Cartan type (the H series)""; ""2.11. Contact Lie algebras of Cartan type (the K series)""; ""2.12. The Recognition Theorem with stronger hypotheses""; ""2.13. $g[\text{sub}(l)]$ as a $g[\text{sub}(0)]$-module for Lie algebras g of Cartan type""; ""2.14. Melikyan Lie algebras""; ""Chapter 3. The Contragredient Case""; ""3.1. Introduction""; ""3.2. Results on modules for three-dimensional Lie algebras"" ""3.3. Primitive vectors in $g[\text{sub}(1)]$ and $g[\text{sub}(-1)]$""""3.4. Subalgebras with a balanced grading""; ""3.5. Algebras with an unbalanced grading""; ""Chapter 4. The Noncontragredient Case""; ""4.1. General assumptions and notation""; ""4.2. Brackets of weight vectors in

opposite gradation spaces""; ""4.3. Determining $g[\text{sub}(0)]$ and its
 representation on $g[\text{sub}(-1)]$ ""; ""4.4. Additional assumptions""; ""4.5.
 Computing weights of $b[\text{sup}(a \in ?)]$ -primitive vectors in $g[\text{sub}(1)]$ ""; ""4.6. Determination of the local Lie algebra""; ""4.7. The irreducibility
 of $g[\text{sub}(1)]$ ""
 ""4.8. Determining the negative part when $g[\text{sub}(1)]$ is irreducible""""
 4.9. Determining the negative part when $g[\text{sub}(1)]$ is reducible""; ""4.10. The case that $g[\text{sub}(0)]$ is abelian""; ""4.11. Completion of the
 proof of the Main Theorem""; ""Bibliography""
