

1. Record Nr.	UNINA9910480536803321
Titolo	Cohomology for quantum groups via the geometry of the nullcone // Christopher P. Bendel [and three others]
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , 2013 ©2013
ISBN	1-4704-1531-3
Descrizione fisica	1 online resource (110 p.)
Collana	Memoirs of the American Mathematical Society, , 1947-6221 ; ; Volume 229, Number 1077
Disciplina	512/.55
Soggetti	Cohomology operations Algebraic topology Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Volume 229, Number 1077 (fourth of 5 numbers)."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	<p>""Contents""; ""Introduction""; ""Chapter 1. Preliminaries and Statement of Results""; ""1.1. Some preliminary notation""; ""1.2. Main results""; ""Chapter 2. Quantum Groups, Actions, and Cohomology""; ""2.1. Listings""; ""2.2. Quantum enveloping algebras""; ""2.3. Connections with algebraic groups""; ""2.4. Root vectors and PBW-basis""; ""2.5. Levi and parabolic subalgebras""; ""2.6. The subalgebra $U(\mathfrak{g})_{\lambda}$""; ""2.7. Adjoint action""; ""2.8. Finite dimensionality of cohomology groups""; ""2.9. Spectral sequences and the Euler characteristic""; ""2.10. Induction functors""</p> <p>""Chapter 3. Computation of $H^*(\mathfrak{g}, \mathbb{C})$ and $H^*(\mathfrak{g}, \mathbb{C})$"" ""3.1. Subroot systems defined by weights""; ""3.2. The case of the classical Lie algebras""; ""3.3. The case of the exceptional Lie algebras""; ""3.4. Standardizing $H^*(\mathfrak{g}, \mathbb{C})$""; ""3.5. Resolution of singularities""; ""3.6. Normality of orbit closures""; ""Chapter 4. Combinatorics and the Steinberg Module""; ""4.1. Steinberg weights""; ""4.2. Weights of $H^*(\mathfrak{g}, \mathbb{C})_{\lambda}$""; ""4.3. Multiplicity of the Steinberg module""; ""4.4. Proof of Proposition 4.2.1""; ""4.5. The weight λ""; ""4.6. Types (\mathfrak{g}, λ), (\mathfrak{g}, λ), (\mathfrak{g}, λ)""; ""4.7. Type (\mathfrak{g}, λ)""</p> <p>""4.8. Type (\mathfrak{g}, λ) with λ dividing $+1$"" ""4.9. Exceptional Lie algebras""; ""Chapter 5. The Cohomology Algebra $H^*(\mathfrak{g}, \mathbb{C})_{\lambda}$""; ""5.1.</p>

Spectral sequences, I"; "5.2. Spectral sequences, II"; "5.3. An identification theorem"; "5.4. Spectral sequences, III"; "5.5. Proof of main result, Theorem 1.2.3, I"; "5.6. Spectral sequences, IV"; "5.7. Proof of the main result, Theorem 1.2.3, II"; "Chapter 6. Finite Generation"; "6.1. A finite generation result"; "6.2. Proof of part (a) of Theorem 1.2.4"; "6.3. Proof of part (b) of Theorem 1.2.4"
"Chapter 7. Comparison with Positive Characteristic"
"7.1. The setting"; "7.2. Assumptions"; "7.3. Consequences"; "7.4. Special cases"; "Chapter 8. Support Varieties over \mathbb{F}_q for the Modules $a_{\mathbb{F}_q}(\lambda)$ and $I_{\mathbb{F}_q}(\lambda)$ "; "8.1. Quantum support varieties"; "8.2. Lower bounds on the dimensions of support varieties"; "8.3. Support varieties of $a_{\mathbb{F}_q}(\lambda)$: general results"; "8.4. Support varieties of $I_{\mathbb{F}_q}(\lambda)$ when λ is good"; "8.5. A question of naturality of support varieties"; "8.6. The Constrictor Method I"; "8.7. The Constrictor Method II"
"8.8. Support varieties of $a_{\mathbb{F}_q}(\lambda)$ when λ is bad"
"8.9. $a_{\mathbb{F}_q}$ when $3 \mid \lambda$ "; "8.10. $a_{\mathbb{F}_q}$ when $3 \nmid \lambda$ "; "8.11. $a_{\mathbb{F}_q}$ when $3 \mid \lambda$ "; "8.12. $a_{\mathbb{F}_q}$ when $3 \mid \lambda, 5 \mid \lambda$ "; "8.13. Support varieties of $I_{\mathbb{F}_q}(\lambda)$ when λ is bad"; "Appendix A."; "A.1. Tables I"; "A.2. Tables II"; "Bibliography"
