

1. Record Nr.	UNINA9910970687603321
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Titolo	Hopf Algebras, Tensor Categories and Related Topics
Pubbl/distr/stampa	Providence : , : American Mathematical Society, , 2021 ©2021
ISBN	9781470464271 1470464276
Edizione	[1st ed.]
Descrizione fisica	1 online resource (372 pages)
Collana	Contemporary Mathematics ; ; v.771
Classificazione	14M3016G2016S4016T0516T2517B3718D1018D2519A2220G42
Altri autori (Persone)	LiuGongxiang MontgomerySusan
Disciplina	512/.55
Soggetti	Hopf algebras Tensor algebra Geometry, Algebraic Algebraic geometry -- Special varieties -- Supervarieties [See also 32C11, 58A50] Associative rings and algebras {For the commutative case, see 13-XX} -- Representation theory of rings and algebras -- Representations of quivers and partially ordered sets Associative rings and algebras {For the commutative case, see 13-XX} -- Rings and algebras arising under various constructions -- Smash products of general Hopf actions [See also 16T05] Associative rings and algebras {For the commutative case, see 13-XX} -- Hopf algebras, quantum groups and related topics -- Hopf algebras and their applications [See also 16S40, 57T05] Associative rings and algebras {For the commutative case, see 13-XX} -- Hopf algebras, quantum groups and related topics -- Yang-Baxter equations Nonassociative rings and algebras -- Lie algebras and Lie superalgebras {For Lie groups, see 22Exx} -- Quantum groups (quantized enveloping algebras) and related deformations [See also 16T20, 20G42, 8 Category theory; homological algebra {For commutative rings see 13Dxx, for associative rings 16Exx, for groups 20Jxx, for topological groups and related structures 57Txx; see also 55Nxx and 55Uxx for \$K\$-theory [See also 16E20, 18F25] -- Grothendieck groups and \$K_0\$ [See also 13D15, 18F30] -- Frobenius induction, Burnside and representation rings Group theory and generalizations -- Linear algebraic groups and related topics {For arithmetic theory, see 11E57, 11H56; for geometric theory, see 14Lxx, 22Exx; for other methods in representation the

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Cover -- Title page -- Contents -- Preface -- List of speakers and titles of talks -- BiHom Hopf algebras viewed as Hopf monoids -- Introduction -- 1. Some combinatorial background -- 2. Cosemigroups in $\mathcal{A}$-monoidal categories -- 3. Semigroups in $\mathcal{A}$-monoidal categories -- 4. Bisemigroups in $\mathcal{A}$-duoidal categories -- 5. Comonoids in $\mathcal{A}$-monoidal categories -- 6. Monoids in $\mathcal{A}$-monoidal categories -- 7. Bimonoids in $\mathcal{A}$-duoidal categories -- References -- Survey on Hopf algebras of GK-dimension 1 and 2 -- 1. Introduction -- 2. Hopf algebras of GK-dimension 1 -- 3. Hopf algebras of GK-dimension 2 -- 4. Further comments, projects and open questions -- Acknowledgments -- References -- On braided double-biproduct Hopf algebras -- Introduction -- 1. Preliminaries -- 2. Some braided isomorphisms -- 3. Double-biproduct Hopf algebras -- 4. 2-cocycle deformations on double-biproduct Hopf algebras -- 5. Some examples -- Acknowledgments -- References -- Module Eilenberg-Watts calculus -- 1. Introduction -- 2. More about the Eilenberg-Watts calculus -- 3. Balanced functors and twistings -- 4. Eilenberg-Watts calculus for module functors -- 5. Eilenberg-Watts calculus for balanced functors -- 6. Transporting (co)monads along Eilenberg-Watts -- References -- Coherent unit actions on braided operads and Hopf algebras -- 1. Introduction -- 2. Braided algebraic operads -- 3. Coherent unit actions and braided $\mathcal{A}$-Hopf algebras -- 4. Criteria for braided binary quadratic regular operads with coherent unit actions -- Acknowledgments -- References -- A novel quantum affine algebra of type $\mathfrak{sl}_n$ and its PBW basis -- 1. Introduction -- 2. Admissible quantum affine algebras $U_q(\mathfrak{sl}_n)$ of type $\mathfrak{sl}_n$ -- 3. New quantum affine algebra $U_q(\mathfrak{sl}_n)$ of type $\mathfrak{sl}_n$ and its quantum Weyl group. -- 4. Definition of imaginary and real root vectors -- 5. A Poincare-Birkhoff-Witt basis of $U_q(\mathfrak{sl}_n)$ -- Acknowledgments -- References -- Finite quasi-quantum groups over abelian groups -- 1. Introduction -- 2. Normalized cocycles on finite abelian groups and braided Gr-categories -- 3. Finite quasi-quantum groups of diagonal type: A brief summary -- 4. Finite quasi-quantum groups of nondiagonal type: A first attempt -- 5. Some further problems -- References -- On biproducts and extensions -- Introduction -- 1. Preliminaries -- 2. The biproduct in the first case -- 3. Representations -- 4. Hopf subalgebras of dimension 16 -- 5. Hopf subalgebras of dimension 2 -- 6. Hopf subalgebras of dimensions 4 and 8 -- 7. The biproduct in the second case -- References -- On the notion of exact sequence: From Hopf algebras to tensor categories -- 1. Introduction -- 2. Preliminaries on Hopf algebras and tensor categories -- 3. Exact sequences of Hopf algebras -- 4. Exact sequences of tensor categories -- 5. Exact sequences of finite tensor categories with respect to a module category -- 6. Examples and open questions -- References -- Algebraic supergroups and their representations -- 1. Introduction -- 2. Algebraic supergroups -- 3. Representations of algebraic supergroups -- 4. Quasireductive supergroups admitting maximal parabolic super-subgroups -- Acknowledgments -- References -- Hopf algebraic methods in finite tensor categories: Characters and integrals -- 1. Introduction -- 2. Representation theory and Yetter-Drinfeld modules

-- 3. Preliminaries: Finite abelian categories -- 4. Induction to the Drinfeld center -- 5. Categorical class functions -- 6. Integral theory and its applications -- 7. Applications to fusion categories -- Acknowledgments -- References -- Indecomposability of weak Hopf algebras -- 1. Introduction. 2. Definitions and basic properties related with weak bialgebras -- 3. The direct sum construction of weak bialgebras and Hopf algebras -- 4. The direct sum construction of weak Hopf algebras and quantum doubles -- 5. Categorical interpretation of the direct sum construction and its generalizations -- Acknowledgments -- References -- Quasi-Hopf algebras of Cartan type and small quasi-quantum groups -- 1. Introduction -- 2. Preliminaries -- 3. Finite-dimensional Quasi-Hopf algebras -- 4. Genuine Quasi-Hopf algebras of Cartan type -- 5. Small quasi-quantum groups -- References -- Back Cover.

Sommario/riassunto

Articles in this volume are based on talks given at the International Workshop on Hopf Algebras and Tensor Categories, held from September 9-13, 2019, at Nanjing University, Nanjing, China. The articles highlight the latest advances and further research directions in a variety of subjects related to tensor categories and Hopf algebras. Primary topics discussed in the text include the classification of Hopf algebras, structures and actions of Hopf algebras, algebraic supergroups, representations of quantum groups, quasi-quantum groups, algebras in tensor categories, and the construction method of fusion categories.
