Lagraa, M.; Touhami, N.

Lie-algebraic structure from inhomogeneous Hopf algebras. (English) Zbl 0928.17013

J. Math. Phys. 39, No. 9, 5007-5014 (1998).

The authors construct Lie algebras of inhomogeneous quantum groups using the approach based on a bicovariant differential calculus on an inhomogeneous Hopf algebra studied in their preprint [The noncommutative Hopf algebra, http://xxx.lanl.gov/abs/q-alg/9705005]. This approach allows them to construct the vector space dual to the right-invariant differential one-forms which is equipped with a Hopf algebra structure which closes on a quantum Lie algebra satisfying a quantum Jacobi identity.

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MSC:

17B37 Quantum groups (quantized enveloping algebras) and related deformations
16W35 Ring-theoretic aspects of quantum groups (MSC2000)
81R50 Quantum groups and related algebraic methods applied to problems in quantum theory
16W30 Hopf algebras (associative rings and algebras) (MSC2000)
58B32 Geometry of quantum groups

Keywords:

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Full Text: DOI

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