On Nichols algebras with standard braiding

Abstract The class of standard braided vector spaces, introduced by Andruskiewitsch and the author in `arXiv:math/0703924v2` to understand the proof of a theorem of Heckenberger [H2], is slightly more general than the class of braided vector spaces of Cartan type. In the present paper, we classify standard braided vector spaces with finite-dimensional Nichols algebra. For any such braided vector space, we give a PBW-basis, a closed formula of the dimension and a presentation by generators and relations of the associated Nichols algebra.

References

[AA] N. Andruskiewitsch and I. Angiono, *On Nichols algebras with generic braiding*. Abstract and file, arXiv:math/0703924v2. Accepted in "Modules and Comodules", Proceedings of a conference dedicated to Robert Wisbauer, 17 pp.

[H2] I. Heckenberger, *The Weyl groupoid of a Nichols algebra of diagonal type*, Inventiones Math. 164, 175–188 (2006).