Oberseminar

zur

Algebra und Algebraischen Kombinatorik

Dr. Tobias Ohrmann

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Higher braidings of diagonal type

To a braided vector space (V, c) we can associate a Hopf algebra $B(V) = T(V)/I$, where the ideal I can be defined as the kernel of a certain symmetrizer map associated to the braiding $c : V \otimes V \to V \otimes V$. The Hopf algebra $B(V)$ is known as the Nichols algebra of (V, c). Given a generalized Cartan matrix A of finite type and a parameter $q \in \mathbb{C}^\times$, it is well-known that the positive part of the Drinfeld-Jimbo quantum enveloping algebra $U_q(A)$ is a Nichols algebra. On the other hand, given a braided vector space (V, c) of diagonal type, under certain conditions we can associate to its Nichols algebra $B(V)$ a so-called Weyl groupoid, which can be seen as a generalization of an ordinary Weyl group. However, the correspondence between Nichols algebras and Weyl groups/groupoids is far from being bijective and there are indications that one needs to replace braided vector spaces by higher braided structures in order to improve it. In the talk, we want to introduce these structures and discuss the aforementioned indications.

This is joint work with Michael Cuntz.

Montag 20.12.2021

ab 14:15 Uhr, in StudIP, per BBB im e-a410

Alle Interessierten sind herzlich eingeladen.

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