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Universal R -matrix of a generalized quantum group

Abstract: Let \mathbb{K} be a field. If a map $\chi : \mathbb{Z}^n \times \mathbb{Z}^n \rightarrow \mathbb{K}^\times$ satisfies the condition that $\chi(a + b, c) = \chi(a, c)\chi(b, c)$ and $\chi(a, b + c) = \chi(a, b)\chi(a, c)$ for all $a, b, c \in \mathbb{Z}^n$, we call it a *bi-character*. For any bi-character χ , a *generalized root system* $R(\chi)$ and a *generalized quantum group* $U(\chi)$ are defined, and $U(\chi)$ has a Kharchenko-PBW basis described in terms of $R(\chi)$. For χ with $|R(\chi)| < \infty$, we give an explicit formula of the universal R -matrix of $U(\chi)$ using any reduced expression of the longest element of the Weyl groupoid of $R(\chi)$. This is a joint work with Iván Angiono.

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一般化された量子群の普遍 R 行列

アブストラクト：一般化された量子群の普遍 R 行列を構成する。(Ivan Angiono との共同研究)