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"Braiding structures on formal Poisson groups and classical solutions of the QYBE"

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ABSTRACT

If $\mathfrak{g}$ is a quasitriangular Lie bialgebra, the formal Poisson group $F[[\mathfrak{g}^*]]$ can be given a braiding structure: this was achieved by Weinstein and Xu using purely geometrical means, and independently by the authors by means of quantum groups. In this paper we compare these two approaches: first, we show that the braidings they produce share several similar properties (in particular, the construction is functorial); second, in the simplest case ($G = SL_2$) they do coincide. The question then rises of whether they are always the same: this is positively answered in a separate paper (see [EGH]).

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