

Carlos Soneira Calvo

Universidade da Coruña

Yetter-Drinfeld modules over weak braided Hopf monoids and center categories

The notion of weak braided Hopf monoid was introduced by the authors in [1] to extend Radford's theory to projections of weak Hopf monoids in strict symmetric categories. In this work we introduce several centralizer constructions to establish, for any weak braided Hopf monoid D in a monoidal category, a monoidal equivalence between the category ${}^D\mathcal{YD}$ of Yetter-Drinfeld modules and the special centralizer of the category of modules ${}_D\mathcal{M}$. We then apply this result to the calculus of centers.

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