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Corey Jones* (jones.6457@osu.edu). *Braided tensor categories from finite von Neumann algebras.*

Connes introduced an abelian subgroup $\chi(M) \leq \text{Out}(M)$ of a von Neumann algebra M . Jones defined a quadratic form κ on this subgroup. By results of Joyal and Street, abelian groups together with quadratic forms define a braided tensor category. In this talk we explain how to generalize this braided tensor category to include not necessarily invertible bimodules in the case M is a finite von Neumann algebra. We will discuss some examples and some conjectures. Based on joint work with Vaughan Jones. (Received September 16, 2019)