

1025-16-222

David E Radford* (radford@uic.edu), Department of Mathematics, Statistics, and, Computer Science (m/c 249), 851 S. Morgan, Chicago, IL 60607-7045. *On the Hennings Invariant of a Finite-Dimensional Factorizable Hopf Algebra*. Preliminary report.

Suppose that H is a finite-dimensional factorizable Hopf algebra over a field k . Then as an algebra the quantum double $D(H)$ is isomorphic to the tensor product $H \otimes H$. Thus the natural oriented quantum algebra structure on the double induces such a structure on the tensor product $H \otimes H$. The presenter showed that the latter is derived from an oriented quantum algebra structure on H and showed that one can start with any oriented quantum algebra A and produce in the same manner an oriented quantum algebra structure on $A \otimes A$.

The work described in this talk builds on the above and is joint with David DeWit and Louis Kauffman. We describe the oriented link invariants arising from $A \otimes A$ in terms of those arising from A . This in principle gives us a way of describing the Hennings invariant arising from $D(H)$ in terms of invariants arising from H . (Received January 23, 2007)