

Meeting: 1001, Evanston, Illinois, SS 24A, Special Session on Hopf Algebras at the Crossroads of Algebra, Category Theory, and Topology

1001-16-186 **Peter C Schauenburg*** (schauen@mathematik.uni-muenchen.de), Mathematisches Institut, Universität München, Theresienstr. 39, D-80333 München, Germany. *Central Braided Hopf Algebras*. Preliminary report.

Hopf algebras in braided monoidal categories can essentially never be (co)commutative unless the category is symmetric. However, a braided Hopf algebra can be a (co)commutative (co)algebra in the center of the base category, that is, (co)commutative with respect to a braiding different from the braiding used in the Hopf algebra axioms. Typical examples arise from reconstruction in braided monoidal categories, or, more specifically, transmutation. We discuss the axioms for and basic facts on such (co)commutative braided Hopf algebras, and their role in bi-Galois theory. (Received August 25, 2004)