1103-16-174 **Yorck Sommerhäuser*** (yorcksom@buffalo.edu), University at Buffalo (SUNY), Department of Mathematics, 244 Mathematics Building, Buffalo, NY 14260. *A Triviality Theorem for Yetter-Drinfel'd Hopf Algebras.*

Usually, a Yetter-Drinfel'd Hopf algebra is not a Hopf algebra. Yetter-Drinfel'd Hopf algebras that are ordinary Hopf algebras are called trivial; by a result of P. Schauenburg, this happens if and only if the quasisymmetry in the category of Yetter-Drinfel'd modules accidentally coincides with the ordinary flip of tensor factors on the second tensor power of the Yetter-Drinfel'd Hopf algebra. In the case of Yetter-Drinfel'd Hopf algebras over group rings of finite groups, this happens if the degrees of homogeneous elements act trivially.

In certain situations, every Yetter-Drinfel'd Hopf algebra is trivial. One such situation will be discussed in the talk, where we will prove the following triviality theorem:

Suppose that A is a Yetter-Drinfel'd Hopf algebra over the group ring of a finite abelian group G, for a base field of characteristic zero. Suppose that A is commutative and semisimple. If the dimension of A is relatively prime to the order of G, then A is trivial.

The result was known in the case where the order of G is prime. (Received August 18, 2014)