

**Meeting:** 1004, Bowling Green, Kentucky, SS 10A, Special Session on Hopf Algebras and Related Topics

1004-16-197      **Siu-Hung Ng\*** ([rng@iastate.edu](mailto:rng@iastate.edu)), Department of Mathematics, Iowa State University, Ames, IA 50011. *Hopf algebras of dimension  $2p$ .*

Let  $p, q$  be two distinct primes and  $k$  an algebraically closed field of characteristic zero. The question whether there exists a non-semisimple Hopf algebra  $H$  over  $k$  of dimension  $pq$  has remained open in general. For the case  $q = 2$ , it was proved by Williams, Beattie and Dascalescu that Hopf algebras of dimensions 6, 10 and 14 are always semisimple. In this talk, we will discuss an elementary proof for the semisimplicity of Hopf algebras of dimension  $2p$ . It follows from a theorem of Masuoka that these Hopf algebras can only be

$$k[C_{2p}], \quad k[D_{2p}] \quad \text{or} \quad k[D_{2p}]^*$$

where  $C_{2p}$  and  $D_{2p}$  are, respectively, the cyclic group and dihedral group of order  $2p$ . (Received January 24, 2005)