

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

1004-16-143      **Margaret Beattie\*** ([mbeattie@mta.ca](mailto:mbeattie@mta.ca)), Mount Allison University, Dept of Mathematics and Computer Science, 67 York St, Sackville, NB E4L 1E6, Canada. *Coalgebras, Hopf algebras and Casimir elements*. Preliminary report.

Let  $A$  be an algebra over a field  $k$ . Then it is well known that  $A$  is separable if and only if there exists an idempotent  $e$  in  $A \otimes A^{op}$ , called the separability idempotent, such that  $ae = ea$  for all  $a \in A$  and  $\pi(e) = 1$  where  $\pi(a \otimes b^{op}) = ab$ . We discuss the role of similar Casimir elements with regard to coFrobenius and symmetric coalgebras and Hopf algebras. This is a preliminary report of joint work with D. Bulacu and B. Torrecillas. (Received January 23, 2005)