

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

1004-16-143 **Margaret Beattie*** (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)