1067-16-1322   **Margaret Beattie*** (`mbeattie@mta.ca`), 67 York St, Sackville, NB E4L1E6, Canada. *Hopf algebras of small dimension.* Preliminary report.

Over an algebraically closed field, the problem of classifying all Hopf algebras of some given small dimension, such as 16 or 32, or for a class of dimensions, such as p, pq , pq^2, etc, for p, q prime, is a difficult one. General techniques are lacking and progress is slow. In recent years D. Fukuda has introduced some arguments involving dimensions and the coradical filtration that allowed him to complete the classification for dimensions 18 and 30. More recently, Cheng and Ng have worked on the problem of classifying Hopf algebras of dimension $4p$ and completed the classification for dimensions 20, 28 and 44. This talk will present some extensions of the techniques of Fukuda and some applications of these to the classification problem. This is joint work with G.A.Garcia. (Received September 20, 2010)