

Meeting: 1002, Pittsburgh, Pennsylvania, SS 8A, Special Session on Graph Polynomials

1002-05-15 **Gary Haggard*** (haggard@bucknell.edu), Bucknell University, Lewisburg, PA 17837, and
Gordon Royle, Department of Computer Science, University of Western Australia, Perth,
Australia. *Computation of Tutte Polynomials*. Preliminary report.

A Tutte polynomial $T(G,x,y)$ contains extensive information about the graph G . For relatively small graphs the polynomial can be computed. This work involves an extension of the algorithm used to compute chromatic polynomials for large graphs to the problem of computing Tutte polynomials for larger graphs. Unfortunately, the definition of large graph for Tutte polynomials is still relatively small due to the increased complexity caused by multiple edges. The report will indicate the progress made recently with some examples that are now possible. Problems for future attention will be mentioned. (Received June 15, 2004)