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

1002-05-161 **Elizabeth W. McMahon*** (`mcmahone@lafayette.edu`), Department of Mathematics, Lafayette College, Easton, PA 18042, and **Beth Shimkus** and **Jessica Wolfson**. *A characteristic polynomial for chordal graphs and rooted graphs.*

The characteristic polynomial for antimatroids generalizes the chromatic polynomial of a graph. We will discuss this one-variable polynomial for two specific types of antimatroids, simplicial shelling of chordal graphs and vertex search of rooted graphs and rooted digraphs. For chordal graphs, this characteristic polynomial is equivalent to a clique generating function; we give two decomposition theorems for vertex search of rooted graphs and rooted digraphs. (Received September 13, 2004)