

1070-05-144

Jacob Harper* (jacob.harper@colorado.edu). *Homology representations arising from a hypersimplex.*

I will start by describing a hypersimplex and its association with Coxeter groups. Then I will construct a matching on the face lattice of a hypersimplex and use discrete Morse theory to classify all subcomplexes whose reduced homology groups are concentrated in a single degree. These homology groups support a natural action of the symmetric group and I will finish my talk by describing the characters that this action produces. (Received February 07, 2011)