

1097-57-528

Timothy A Schroeder* (tschroeder@murraystate.edu), Faculty Hall 6C, Murray, KY 42071.

ℓ^2 -Betti numbers and graph embeddings.

Associated to any Coxeter system (W, S) is a labeled simplicial complex L , called the nerve of (W, S) , and a complex Σ , called the Davis complex, on which W acts properly and cocompactly. Results and conjectures regarding the (reduced) ℓ^2 -homology of Σ provide avenues along which to approach questions regarding embeddings of a graph. We explain this connection and describe a program for estimating the genus of a graph. (Received January 29, 2014)