The Oliver Club

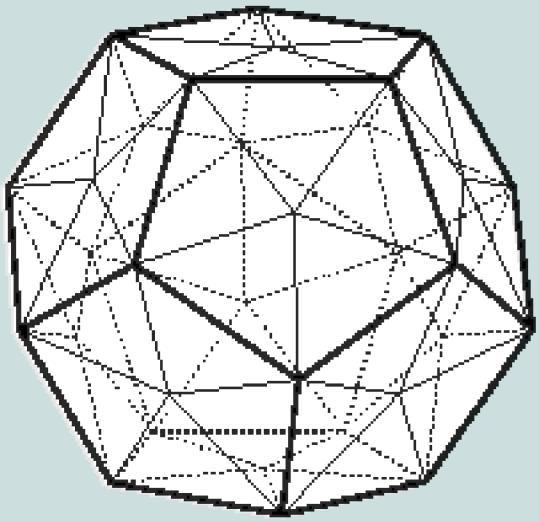
www.math.cornell.edu/~oliver/

Edward Swartz, Cornell University

f-Vectors of Manifolds

In the over 100 years since the discovery of the Euler-Poincaré formula there have been tremendous advances in the understanding of the geometry and topology of manifolds. However, the combinatorial properties of triangulations remain largely mysterious. For instance, there are no manifolds in dimension five or higher whose f-vector, which is just a simple encoding of the number of faces in each dimension, is completely understood.

We will tour a number of recent developments in this subject. Our trip will involve an apparently ambitious generalization of the celebrated g-conjecture for spheres to manifolds due to Kalai, and a topological finiteness result for vertex-edge enumeration.



Poincaré homology sphere

Thursday, October 23, 2008
at 4:25 PM in 406 Malott Hall

Refreshments will be served at 3:55 PM in the Mathematics Department lounge (532 Malott Hall).