The Oliver Club

www.math.cornell.edu/~oliver/

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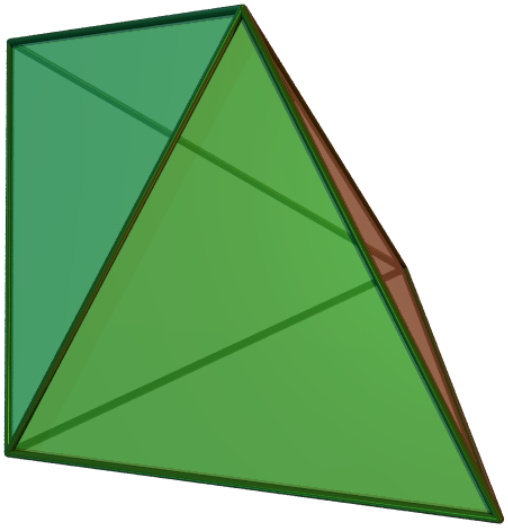
Graph Chordality Via the Weil Lefschetz Map



Chordality is a fundamental notion in graph theory; it finds application and stands in relation to graph colorings and perfect graphs, algorithmic graph theory, graph embeddings and Appolonian packings.

A central contribution to a proper understanding of chordality was provided in the work of Gromov and Kalai which connects chordality to framework rigidity of simplicial polytopes as proven by Cauchy (and many others following him): Chordality, in presence of framework rigidity, detects minimal rigidity of a simplicial polytope. I will relate graph chordality to the study of projective toric varieties and address a variety of problems concerning the combinatorics of polytopes.

Thursday, February 26, 2015
at 4:00 PM in 532 Malott Hall

Refreshments will be served at 3:30 PM in the Mathematics Department lounge (532 Malott Hall).