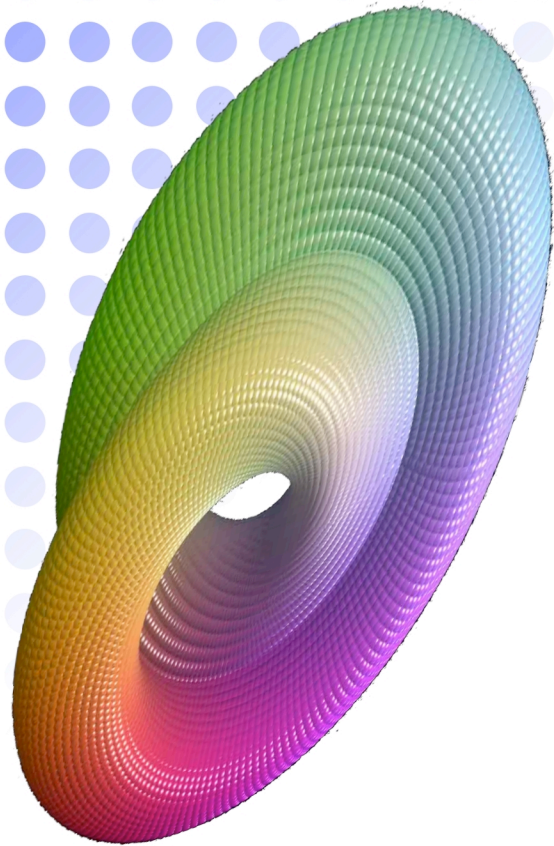


# Michigan Math Club

Thursday at 4pm in **East Hall 2851**  
(Nesbitt Room) Free Pizza and Pop



## Cutting Tetrahedra with Scissors

Alexander Barvinok

Abstract for 27 Oct. 2011



David Hilbert asked whether you can always cut a given polyhedron up with scissors into finitely many pieces and rearrange the pieces to give a cube of the same volume. (This is part of Hilbert's Third Problem.) Max Dehn showed you cannot always do it: you cannot do it for a regular tetrahedron. Dehn's idea is quite surprising, and we will discuss it. For starters we will consider the two-dimensional case: cutting up polygons.