

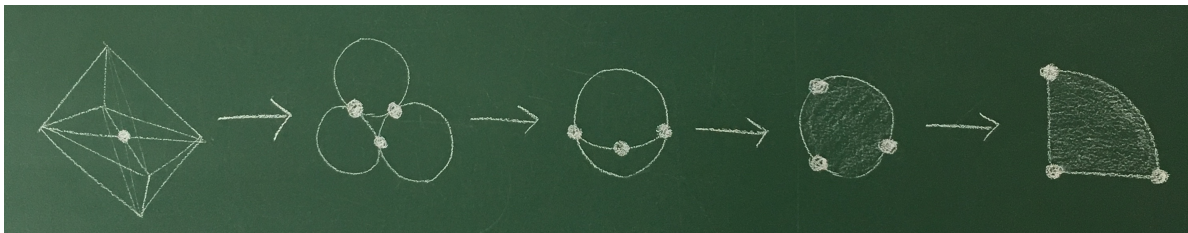
Student Research Talks (StReeTs)

Mason Experimental Geometry Lab (MEGL)

Polygon Spaces

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Abstract

Given a vector of positive real numbers $\ell = (\ell_1, \dots, \ell_n) \in \mathbb{R}_{>0}^n$, an ℓ -gon in \mathbb{R}^d is a closed linkage of line segments in \mathbb{R}^d with ordered sidelengths ℓ_i . The polygon space $E_\ell(d)$ is the collection of all ℓ -gons in \mathbb{R}^d . These spaces are algebraic varieties, are smooth manifolds for generic ℓ , and have a natural action by the special orthogonal group $SO(d)$ which may introduce singularities. Our goal is to understand the various “topological types” of $E_\ell(d)/SO(d)$ as ℓ and d vary, and we introduce an embedding of these spaces that keeps track of the relevant topological data.

Date: Friday, December 1, 2017

Time: 2:30pm–3:30pm

Place: Exploratory Hall 4106

Pizza and soda will be served at the presentation.

For further information or for special accommodations, please contact Sean Lawton via email at seanlawton@gmail.com or drop by the MEGL.