

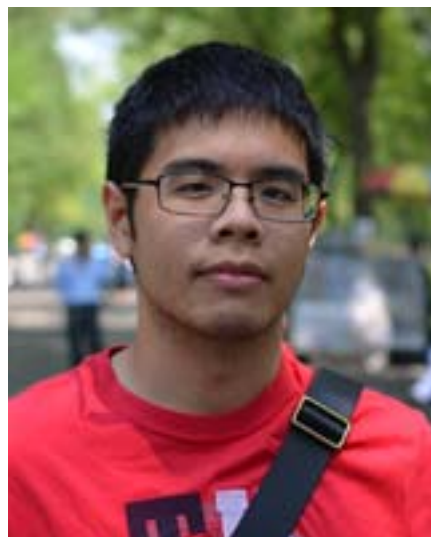
## ***FELIX KLEIN SEMINAR***

**Guest Speaker: Samuel Lin**  
**Michigan State University**

**Date:** Thursday, January 26, 2017

**Time:** 2:00 PM

**Location:** 258 Hurley Hall



***Lecture Title:***

**Curvature Free Rigidity for Higher Rank Three-manifolds**

***Abstract***

Fixing  $K=-1,0$ , or  $1$ , a complete Riemannian manifold is said to have higher rank if each geodesic admits a parallel vector field making curvature  $K$  with the geodesic. Locally symmetric spaces provide examples. Rank rigidity theorems aim to show that these are the only examples of manifolds of higher rank, usually with additional curvature assumptions. After discussing historical results, I'll discuss how rank rigidity results hold in dimension three without additional curvature assumptions.