

Friday, October 29, 2021, 4:00 pm

COLLOQUIUM TALK

Speaker: Grant Lakeland (EIU)

Old Main 2231

Systoles of hyperbolic surfaces via graph theory

Abstract:

The systole of a surface is the shortest loop that doesn't enclose a disk or a disk with a single puncture on the surface. For punctured spheres obtained by gluing certain hyperbolic polygons in a way that the result is an arithmetic surface, we can use graph theory to bound the length of the systole. Most of this talk will discuss planar graph theory and be accessible to undergraduate students. This is joint work with Clayton Young.