Geometry, Groups and Dynamics/GEAR Seminar
(held at the Illinois hub of GEAR )

**12:00 pm, Tuesday, February 23, 2016, 243 Altgeld Hall**

Grant Lakeland (Eastern Illinois University)

Cheeger constants of arithmetic hyperbolic surfaces

Abstract: Given a Riemannian manifold M, the Cheeger constant, h(M), is a geometric invariant which measures the extent to which M has “bottlenecks” - roughly speaking, these are low volume, separating, codimension one submanifolds. We implement an algorithm of Benson to explicitly compute the Cheeger constant for a collection of arithmetic hyperbolic surfaces. The results have connections to arithmetic reflection groups, and to the relationship between the arithmetic and geometry of Fuchsian groups. This is joint work with Brian Benson.

Video