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

2:00 pm, Monday, February 5, 2018, 241 Altgeld Hall
Christopher Connell (Indiana University)
Lower hyperbolic rank rigidity of quarter-pinched manifolds

Abstract: A Riemannian manifold M has higher hyperbolic rank if every geodesic has a perpendicular Jacobi field making sectional curvature -1 with the geodesic. If in addition, the sectional curvatures of M lie in the interval $[-1,-1/4]$, and M is closed, we show that M is a locally symmetric space of rank one. This partially extends work by Constantine using completely different methods. It is also a partial converse to Hamenstädt's hyperbolic rank rigidity result for sectional curvatures at most -1, and complements well-known results on Euclidean and spherical rank rigidity. This is joint work with Thang Nguyen and Ralf Spatzier.

Video (unavailable)