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

12:00 pm Tuesday, September 15, 2015 in 345 Altgeld Hall

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Random walks and random group extensions

Abstract: Let us consider a group G of isometries of a delta-hyperbolic metric space X, which is not necessarily proper (e.g. it could be a locally infinite graph). We can define a random walk by picking random products of elements of G, and projecting this sample path to X. We show that such a random walk converges almost surely to the Gromov boundary of X, and with positive speed. As an application, we prove that a random k-generated subgroup of the mapping class group is convex cocompact, and a similar statement holds for Out(F_n). This is joint work, partially with J. Maher and partially with S. Taylor.

Video