

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

12:00 pm, Tuesday, March 27, 2018, 243 Altgeld Hall

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Random Walks on $\text{Out}(F_r)$

Abstract: While many mathematicians hypothesized for years as to which elements of mapping class groups and the $\text{Out}(F_r)$ are generic, there has only in the past decade been an explosion of results on the topic. This explosion began with Maher and Rivin proving that pseudo-Anosovs are indeed generic within the mapping class group. Rivin further gave that fully irreducibles (specifically fully irreducibles not induced by surface homeomorphisms) are generic. Many results followed by Sisto, Calegari-Maher, Maher-Tiozzo, Karlsson, Horbez, and Dahmani-Horbez. Kapovich-Pfaff gave a refinement of this work in a particular $\text{Out}(F_r)$ setting by proving specific invariant values along a "train track directed" random walk. Answering a question of that paper, Gadre-Maher proved that pseudo-Anosovs are generically "principal." Inspired by the work of Gadre-Maher, we are expanding the "train track directed" random walk work to a full random walk on $\text{Out}(F_r)$. This is joint work in progress.

Video (unavailable)