

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

Tuesday, April 14, 2015, 1:00 pm in 243 Altgeld Hall

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Stability in mapping class groups and right-angled Artin groups

Abstract: A well studied question in surface topology asks whether every purely pseudo-Anosov subgroup of the mapping class group is convex cocompact. This question can be reformulated in a way which references only the geometric structure of the mapping class group using a strong form of quasiconvexity called stability. In joint work with Thomas Koberda and Johanna Mangahas, we recently gave a complete characterization of stable subgroups of right-angled Artin groups (RAAGs), thus answering the RAAG analog of the question above. In particular, we show that any finitely generated subgroup of a RAAG all of whose nontrivial elements have cyclic centralizer is stable and, in particular, quasiconvex. In this talk, I will introduce the general notion of stability, explain its importance in RAAGs, and give some applications of our theorem.

[Video](#)