1176-57-99 **Jacob Russell*** (jacob.russell@rice.edu). *Geometric finiteness and surface group extensions.*

Farb and Mosher defined convex cocompact subgroups of the mapping class group in analogy with convex cocompact Kleinian groups. These subgroups have since seen immense study, producing surprising applications to the geometry of surface group extension and surface bundles. In particular, Hamenstadt plus Farb and Mosher proved that a subgroup of the mapping class groups is convex cocompact if and only if the corresponding surface group extension is Gromov hyperbolic.

Among Kleinian groups, convex cocompact groups are a special case of the geometrically finite groups. Despite the progress on convex cocompactness, no robust notion of geometric finiteness in the mapping class group has emerged. Durham, Dowdall, Leininger, and Sisto recently proposed that geometric finiteness in MCG(S) might be characterized by the corresponding surface group extension being hierarchically hyperbolic instead of Gromov hyperbolic. We provide evidence in favor of this hypothesis by proving that the surface group extension of the stabilizer of a multicurve is hierarchically hyperbolic (Received January 16, 2022)