

ABSTRACT:

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Automorphisms of RAAGs: vast or skimpy ?

Say that a group  $G$  involves all finite groups if for every finite group  $F$ , some finite index subgroup of  $G$  maps onto  $F$ . For instance, for  $n > 2$ ,  $SL_n(\mathbb{Z})$  does not involve all finite groups, whereas  $Out(F_n)$  does for  $n > 1$ . The family of groups  $Out(A)$  of outer automorphisms of right angled Artin groups "interpolates" between  $SL_n(\mathbb{Z})$  and  $Out(F_n)$ , and the goal of this talk is to describe the boundary between these 2 behaviors, within this family of groups. We also study other "vastness" properties like SQ-universality, of having many quasimorphisms, and we prove that the boundary happens to be the same. This is a joint work with Andrew Sale.