

1132-20-193

**Matt Clay, Johanna Mangahas\*** (mangahas@buffalo.edu) and **Dan Margalit.** *Normal right-angled Artin group subgroups of mapping class groups.*

Free normal subgroups of mapping class groups abound, by the result of Dahmani, Guirardel, and Osin that the normal closure of high powers of pseudo-Anosovs is free. At the other extreme, if a normal subgroup contains a mapping class supported on too small a subsurface, it can never be isomorphic to a right-angled Artin group, by work of Brendle and Margalit. I will talk about a case right in between: a family of normal subgroups isomorphic to non-free right-angled Artin groups. We also recover, expand, and make constructive the result of Dahmani, Guirardel, and Osin about free normal subgroups. We do this by creating a version of their “windmill” construction tailor-made for the projection complexes introduced by Bestvina, Bromberg, and Fujiwara. This is joint work with Matt Clay and Dan Margalit. (Received July 24, 2017)