

1135-05-1156

Michael Joseph* (mjoseph@daltonstate.edu). *Toggling antichains of posets.*

Toggles are simple involutions that generate permutation groups on various combinatorial sets. First introduced by Cameron and Fon-Der-Flaass, the toggle group on the set of order ideals of a poset has been well-studied for years, particularly for studying a map called *rowmotion*. Recently Striker has motivated the study of toggle groups on general families of subsets, including antichains. We will examine the relationship between the toggle groups on antichains and order ideals, including an explicit isomorphism between the two groups. We will also describe a piecewise-linear generalization of toggling for Stanley's chain polytope, especially the connections with an established generalization of order ideal toggles to the order polytope of a poset. (Received September 20, 2017)