

1135-05-1024 **Corey Vorland*** (corey.vorland@ndsu.edu), Minard 408. 1210 Albrecht Boulevard, Fargo, ND 58108. *Homomesy in products of three chains and multidimensional recombination.*

The actions of rowmotion and promotion on order ideals of a poset have generated a significant amount of interest in recent algebraic combinatorics research. One property associated to rowmotion and promotion that suggests a poset is “nice” is the homomesy property, which occurs when a statistic on a set has the same average value over any orbit as the global average of that statistic. In this talk, we will discuss homomesy on the product of chains poset using a beautiful technique called recombination. We will also expand from the product of chains setting to a more general class of posets. (Received September 18, 2017)