

1121-05-247

**Michael Joseph\*** ([michael.j.joseph@uconn.edu](mailto:michael.j.joseph@uconn.edu)). *Homomesies in Actions of Toggle Groups.*

We consider systems consisting of a finite set  $S$  of objects, and an invertible map that partitions  $S$  into orbits. For many such systems one can find statistics on  $S$  that have the same average across any orbit; we call such statistics “homomesic”. In this talk, our invertible maps will be products of toggling involutions. We consider two examples in detail: one on the set of noncrossing partitions of  $[n] := \{1, 2, \dots, n\}$ , and another on independent sets of a path graph. We will also discuss some consequences of the homomesy results. (Received July 19, 2016)