

1135-05-890

**Katherine Moore\*** ([moorek@math.dartmouth.edu](mailto:moorek@math.dartmouth.edu)). *Permutations Realized by Dynamical Systems.*

Recently developed methods for estimating the entropy of time series are based on properties of the set of permutations that represent the short-term behavior of dynamical systems. Specifically, it has been shown that for piecewise monotone interval maps, the number of distinct permutations realized in this way encodes the system's topological entropy. In this talk, I will present a method for understanding the permutations realized by signed shifts, a class of maps which is particularly amenable to a combinatorial interpretation, and provide enumerative results in certain cases. Additionally, I will connect these ideas to properties of periodic points and permutation statistics for cycles to further motivate methods for understanding time series complexity. (Received September 16, 2017)