

1145-20-434

William Coker*, cocker@math.wisc.edu, and **Meng-Che Ho**. *A Characterization of Finite Nilpotent Groups Using Word Maps.*

Many classes of groups are characterized by some class of words. Recently, there has been significant interest in the probability distributions induced by word maps over a group. For example, the recently proven Ore Conjecture stated that the commutator word map was surjective on all finite simple groups. In this talk, we will show that a finite group is nilpotent if and only if every surjective word map is uniform. In doing so, we will show how to construct for any non-nilpotent finite group G a word w that is surjective but not uniform on G . (Received September 06, 2018)