1139-28-98 **Aimee S. A. Johnson*** (aimee@swarthmore.edu), Department of Mathematics and Statistics, 500 College Ave., Swarthmore, PA 19081, and **David M McClendon**, Department of Mathematics ASC 2021, Big Rapids, MI 49307. *Speedups of $\mathbb{Z}^d$-odometers.* Preliminary report.

A speedup of a dynamical system (X, T) is another system (X, T^p) where $p : X \to \{1, 2, 3 \dots\}$. A fundamental question about speedups concerns the relationship between the original system and the speedup. In the measure-theoretical case, Arnoux, Ornstein, and Weiss showed there does not need to be any relationship: given any two ergodic systems, one can be sped up to be isomorphic to the other. On the other hand, in the topological setting, Ash proved that given two Cantor minimal systems, whether or not one can be sped up to be conjugate to the other depends on the dimension groups of the systems. In fact, in recent work by Alvin, Ash, and Ormes, they show that any bounded speedup of an odometer must be an odometer that is conjugate to the original.

Speedups have been generalized to $\mathbb{Z}^d$ actions by Johnson and McClendon and they have shown that the measure-theoretical case remains the same. In this talk we discuss the generalization of the Alvin, Ash, and Ormes result to $\mathbb{Z}^d$ actions, starting with a description of a $\mathbb{Z}^d$-odometer and discussing the similarities and differences to the $d = 1$ case. (Received February 03, 2018)