1077-37-2936 **Aimee S.A. Johnson** (aimee@swarthmore.edu) and **David M. McClendon*** (dmcclen1@swarthmore.edu), Department of Mathematics and Statistics, 500 College Ave., Swarthmore, PA 19081. *Speedups of ergodic $\mathbb{Z}^d$ actions.*

A *speedup* of a measure-preserving transformation (m.p.t.) (X, μ, T) is another m.p.t. (X, μ, S) where $S(x) = T^{p(x)}(x)$ for some measurable function $p : X \to \{1, 2, 3, ...\}$. Arnoux, Ornstein and Weiss showed that given any two ergodic m.p.t.s, there is a speedup of one which is isomorphic to the other. Recently, a relative version of this result dealing with ergodic group extensions was obtained by Babichev, Burton and Fieldsteel.

In this talk we discuss what is meant by a *speedup* of an action of d commuting m.p.t.s, and describe results which generalize the aforementioned ideas to ergodic actions of $\mathbb{Z}^d$. (Received September 23, 2011)