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Drew D. Ash*, drew.ash@du.edu. *Topological Speedups*.

Given a dynamical system (X, T) one can define a speedup of (X, T) as another dynamical system $S : X \rightarrow X$ where $S = T^{p(\cdot)}$ for some $p : X \rightarrow \mathbb{Z}^+$. In 1985 Arnoux, Ornstein, and Weiss showed that given a pair of measure theoretic dynamical systems, one is isomorphic to a speedup of the other under the very mild condition that both transformations are aperiodic. In this talk, I will give the setting and relevant definitions for what we mean by a topological speedup; then we will discuss a characterization theorem for speedups of minimal Cantor systems. This theorem is both a topological analog of the Arnoux-Ornstein-Weiss result and a sort of “one-sided” version of a theorem of Giordano-Putnam-Skau on topological orbit equivalence. Finally, I will discuss on-going joint work with Lori Alvin and Nic Ormes on bounded speedups, i.e., speedups where the function p is bounded and therefore continuous. (Received August 22, 2015)