

1092-37-344

Nicholas Ormes* (normes@du.edu), 2360 S. Gaylord St., Denver, CO 80208, and **Ronnie Pavlov** (rpavlov@du.edu), 2360 S. Gaylord St., Denver, CO 80208. *Extender sets and multidimensional subshifts*. Preliminary report.

In this talk, we consider a \mathbb{Z}^d extension of the well-known fact that one-dimensional shifts with only finitely many follower sets are sofic. As in a paper of Kass and Madden, we adopt a natural \mathbb{Z}^d analog of a follower set, called an extender set. The extender set of a finite word w in a \mathbb{Z}^d symbolic system is the set of all configurations of symbols on the complement of w which, when concatenated with w , form a legal point of the system. We show that for any $d \geq 1$ and any \mathbb{Z}^d subshift X , if there exists n so that the number of extender sets of words on a d -dimensional hypercube of side length n is less than or equal to n then X is sofic, i.e. a topological factor of a \mathbb{Z}^d shift of finite type. There are easy examples of non-sofic systems for which this number of extender sets is $n + 1$ for every n . (Received August 13, 2013)