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David Bruce Cohen* (dc17@rice.edu). *The large scale geometry of strongly aperiodic subshifts of finite type.*

A subshift on a group G is a closed, G -invariant subset of the collection of maps from G to A , for some finite set A . It is said to be of finite type if it is defined by a finite collection of “forbidden patterns”. For instance, the set of biinfinite words in some alphabet in which no letter appears three times in a row is a subshift of finite type over the additive group of integers. A subshift of finite type X over G is said to be strongly aperiodic if no element of G has a fixed point in X . We will discuss the question of which groups admit strongly aperiodic subshifts of finite type and how the answer to this question is related to the large scale geometry of groups. (Received September 07, 2014)