Abstract

Sarnak’s conjecture states that any topological dynamical system of zero entropy is disjoint from the Möbius function. Bourgain proved Sarnak’s conjecture for certain bounded rank-one subshifts. In this colloquium I will give some background information about this important conjecture and its connections to several branches of mathematics. The new result I will talk about is Sarnak’s conjecture for two classes of rank-one subshifts which have unbounded cutting parameters. The first class corresponds to rank-one measure-preserving transformations that are isomorphic to an odometer. The second class contains the well-known Katok’s map and its generalizations. This is joint work with Mahmood Etedadialiabadi.