1046-37-656   **Michael Hochman*** (`hochman@math.princeton.edu`), Department of mathematics, Fine Hall, Washington rd., Princeton, NJ 08544. *$\mathbb{Z}^d$-actions on the Cantor set: Approximation, Rohlin properties and recursion theory.*

I will discuss recent work about the space A of continuous actions of $\mathbb{Z}^d$ on the Cantor set, $d > 1$, specifically questions of density and genericity of dynamical properties. The topology of A is controlled to some extent by shifts of finite type, and recent constructions and invariants for SFTs can be appied to these proplems. In particular, I will discuss the existence of actions with dense isomorphism class (the weak Rohlin property) and why actions cannot be effectively described; why, in contrast to the situation in the space of $\mathbb{Z}$-actions, there does not exist a co-meagre isomorphism class (the strong Rohlin property fails); and other results concerning the approximation of certain types of actions by effective ones. (Received September 09, 2008)