Michael Hochman* (hochman@math.princeton.edu), Department of mathematics, Fine Hall, Washington rd., Princeton, NJ 08544. \textit{Z}^d\text{-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 applied to these problems. 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)