

# Invariants for equicontinuous group actions on Cantor sets

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Abstract: Equicontinuous group actions on compact metric spaces have appeared, in various contexts, in many areas of dynamics and foliation theory. For example, the transverse dynamics of a Riemannian foliation is equicontinuous. In continuum theory, actions on fibres of generalized solenoids provide examples of equicontinuous group actions on Cantor sets with many counterintuitive properties. Group actions on topological spaces and, in particular, their enveloping (Ellis) semigroup, have long been a topic of interest in topological dynamics.

In this talk, we concentrate on equicontinuous group actions on Cantor sets. We obtain a ‘coordinate representation’ of the Ellis group, associated to such action, and apply it to the study of geometric and dynamical properties of foliated spaces with totally disconnected transversals. In particular, for certain classes of such foliated spaces we obtain results relating the Ellis semigroup, the growth properties of the leaves, and the automorphism group of the transverse dynamical system.

Based on recent results joined with Clark and Fokkink, Dyer and Hurder.