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Dana Bartosova*, Instituto de Matematica e Estatistica, Universidade de Sao Paulo, Sao Paulo, Brazil. *Ramsey properties in topological dynamics.*

We will explain how Ramsey-type properties of (discrete or metric) Fraïssé classes (amalgamation classes of finitely-generated structures with the joint embedding property) can be expressed in terms of automorphism groups of their limit structures. We were motivated by work of Kechris, Pestov and Todorčević who discovered an equivalence between the Ramsey property for classes of finite structures and extreme amenability of automorphism groups of their limits, and provided powerful tools to compute universal minimal flows. A topological group is *extremely amenable* if it has a fixed point under every continuous action on a compact Hausdorff space. For a topological group G , a continuous action (or a *flow*) on a compact Hausdorff space is *minimal* if it contains no proper closed G -invariant subset. A minimal flow is the universal minimal flow of G if every other minimal flow is its quotient.

We will mention our recent Ramsey-type results (with A. Kwiatkowska and J. Lopez-Abad and B.R. Mbombo) and their applications in dynamics and discuss a couple of future directions. For instance, it is not known what the universal minimal flows of the homeomorphism groups of the two-dimensional Euclidean sphere, the Hilbert cube or the pseudo-arc are. (Received September 23, 2015)