

Abstract: Each topological group G admits a unique universal minimal dynamical system $(M(G), G)$. For a locally compact non-compact group this is a nonmetrizable system with a rich structure, on which G acts effectively. However there are topological groups for which $M(G)$ is the trivial one point system (groups with the fixed point on compacta property), as well as topological groups G for which $M(G)$ is a metrizable space and for which one has an explicit description. I will survey this new theory as developed by Pestov, Uspeskij and Glasner and Weiss and show how it relies on combinatorial Ramsey type theorems.