HOMOGENEOUS SPACES AND TOPOLOGICAL TRANSFORMATION GROUPS.

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Every homogeneous topological space X is naturally associated with its group of homeomorphisms $\mathrm{Hom}(X)$ which transitively acts on X. A topology on a group $\mathrm{Hom}(X)$ (a subgroup of $\mathrm{Hom}(X)$) is called admissible if the group in this topology is a topological group and its action is continuous. Admissible topologies on the groups of homeomorphisms (subgroups which actions are transitive) allow us to study both homogeneous spaces using the theory of topological groups and topological groups as transformation groups of correspondent homogeneous spaces.

Approaches how to find groups which transitively act on homogenous spaces and their admissible topologies will be considered in the talk.