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Orbit class and its application

In this talk we introduce a new concept to study topological spaces endowed with an action of a topological group. We call this concept orbit class and is often a good replacement for the well-known concept orbit type. We define a partial ordering on the set of all orbit classes. We apply the properties of orbit classes to define and study the equivariant LS-category and the invariant topological complexity. Furthermore, we consider the category of orbit classes. This is a progress report of an ongoing research topic.

References:

[1] M. Bayeh and S. Sarkar. Orbit class and remarks on invariant topological complexity. *Submitted* (2016).

[2] H. Colman and M. Grant. Equivariant topological complexity. *Algebr. Geom. Topol.* 12 (2012) 2299–2316.

[3] W. Lubawski and W. Marzantowicz. Invariant topological complexity. *Bull. Lond. Math. Soc.* 47 (2015) 101–117.

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