Recall that a semitopological group is a group with a topology such that the multiplication in the group is separately continuous. A paratopological group is a group with a topology such that the multiplication is jointly continuous. If $G$ is a paratopological group and the inverse operation of $G$ is continuous, then $G$ is called a topological group.

In this paper, a new cardinal function called the strong Hausdorff number in semitopological groups is introduced. It is shown that every paratopological group with countable strong Hausdorff number is $\omega$-admissible. Applying this result, it is proved that every bounded set in a paratopological group with countable strong Hausdorff number is strongly bounded, which partially answers to a question posed by Sánchez and Tkachenko.

Reviewer: Yuri Movsisyan (Yerevan)

MSC:

- 22A05 Structure of general topological groups
- 54H11 Topological groups (topological aspects)
- 54B30 Compactness
- 54G20 Counterexamples in general topology

Keywords:

- paratopological group; strong Hausdorff number; bounded sets

Full Text: DOI

References:

[3] Ravsky, A., Pseudocompact paratopological groups that are topological (2013)

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.