Doležal, Martin; Moors, Warren B.
On a certain generalization of \( W \)-spaces. (English) Zbl 1415.91071

Summary: We present a simple generalization of \( W \)-spaces introduced by G. Gruenhage [Trans. Am. Math. Soc. 224, 323–338 (1977; Zbl 0343.54009); General Topology Appl. 6, 339–352 (1976; Zbl 0327.54019)]. We show that this generalization leads to a strictly larger class of topological spaces which we call \( \tilde{W} \)-spaces, and we provide several applications. Namely, we use the notion of \( W \)-spaces to provide sufficient conditions for the product of two spaces to be a Baire space, for a semitopological group to be a topological group, or for a separately continuous function to be continuous at the points of a certain large set.

MSC:
91A44 Games involving topology, set theory, or logic
91A05 2-person games
54E52 Baire category, Baire spaces
54C08 Weak and generalized continuity

Keywords:
topological games; Baire spaces; semitopological groups; separate continuity

Full Text: DOI arXiv

References:

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.