Ahmadi, Zand M. R.; Rostami, S.

ω-narrowness and resolvability of topological generalized groups. (English) Zbl 1468.22002 J. Algebr. Syst. 8, No. 1, 17-26 (2020).

Summary: A topological group $H$ is called $\omega$-narrow if for every neighbourhood $V$ of its identity element there exists a countable set $A$ such that $VA = H = AV$. A semigroup $G$ is called a generalized group if for any $x \in G$ there exists a unique element $e(x) \in G$ such that $xe(x) = e(x)x = x$ and for every $x \in G$, there exists $x^{-1} \in G$ such that $x^{-1}x = xx^{-1} = e(x)$. Also let $G$ be a topological space and the operation and inversion mapping are continuous, then $G$ is called a topological generalized group. If $\{e(x) | x \in G\}$ is countable and for any $a \in G$, $\{x \in G | e(x) = e(a)\}$ is an $\omega$-narrow topological group, then $G$ is called an $\omega$-narrow topological generalized group. In this paper, $\omega$-narrow and resolvable topological generalized groups are introduced and studied.

MSC:

22A15 Structure of topological semigroups
22A20 Analysis on topological semigroups

Keywords:
resolvable topological generalized group; $\omega$-narrow topological generalized group; precompact topological generalized group; invariance number

Full Text: DOI

References:


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