G-Sequentially connectedness for topological groups with operations

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Abstract: It is well known that for a Hausdorff topological group X, the limits of convergent sequences in X define a function denoted by lim from the set of all convergent sequences in X to X. This notion has been modified in [4] by Connor and Grosse-Erdmann for real functions by replacing lim with an arbitrary linear functional G defined on a linear subspace of the vector space of all real sequences and Çakallı [2] has introduced the G-sequentially connectedness for topological groups.

In [6] Orzech introduced a certain algebraic category C called category of groups with operations including groups, rings without identity, R-modules, Lie algebras, Jordan algebras, and many others.

In this work we present some results about G-sequential continuity, G-sequential connectedness and fundamental system of G-sequentially open neighbourhoods for topological groups with operations.

Keywords: Sequences, G-sequentially continuity, G-sequentially connectedness, topological group with operations

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