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Semi-generalized continuous maps in topological spaces. (English) Zbl 0883.54015
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N. Levine [Rend. Circ. Mat. Palermo, II. Ser. 19, 89-96 (1970; [Zbl 0231.54001](#))] has defined a subset A to be g -closed if $\text{Cl}(A) \subset O$ when $A \subset O$ and O is open. The complement of a g -closed set is called g -open. The purpose of this paper is to introduce and study the concepts of two new classes of maps, namely the class of sg -continuous maps, which includes the class of continuous maps, and the class of sg -irresolute maps defined analogously to irresolute maps. Moreover, we introduce the concepts of sg -compactness and sg -connectedness of topological spaces. Among the theorems proved are the following:

(A) The following are equivalent: (i) X is sg -connected; (ii) X and \emptyset are the only subsets of X which are both sg -open and sg -closed; (iii) each sg -continuous map of X into a discrete space Y with at least two points is a constant map.

(B) sg -connectedness is preserved under sg -irresolute surjections.

MSC:

[54C08](#) Weak and generalized continuity
[54D10](#) Lower separation axioms (T_0 - T_3 , etc.)

Cited in 1 Document

Keywords:

[sg-continuous maps](#); [sg-irresolute maps](#)

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