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# A Unified Fixed Point Theory in Generalized Convex Spaces

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摘要

关键词 [multimap classes  \$\mathfrak{B}\$  and  \$\mathfrak{A}\_{c^{\kappa}}\$](#)   [\$\Phi\$ -map](#)  [\$\Phi\$ -set](#)  [\$\Phi\$ -space](#) [admissible  \$SG\$ -convex space](#) [the Zima type](#) [locally  \$SG\$ -convex space](#)  [\$LG\$ -space](#)

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**Abstract** Let  $\mathfrak{B}$  be the class of 'better' admissible multimaps due to the author. We introduce new concepts of admissibility (in the sense of Klee) and of Klee approximability for subsets of  $SG$ -convex uniform spaces and show that {it any compact closed multimap in  $\mathfrak{B}$  from a  $SG$ -convex space into itself with the Klee approximable range has a fixed point.} This new theorem contains a large number of known results on topological vector spaces or on various subclasses of the class of admissible  $SG$ -convex spaces. Such subclasses are those of  $\Phi$ -spaces, sets of the Zima--Had\ v zi' c type, locally  $SG$ -convex spaces, and  $LG$ -spaces. Mutual relations among those subclasses and some related results are added.

**Key words** [multimap classes  \$\mathfrak{B}\$  and  \$\mathfrak{A}\_{c^{\kappa}}\$](#)   [\$\Phi\$ -map](#)  [\$\Phi\$ -set](#)  [\$\Phi\$ -space](#) [admissible  \$SG\$ -convex space](#) [the Zima type](#) [locally  \$SG\$ -convex space](#)  [\$LG\$ -space](#)

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