

**Živanović, Ž.**

**Collection of quasiextendable maps in functional spaces.** (English) Zbl 0712.54012  
Glas. Mat., III. Ser. 24(44), No. 2-3, 381-390 (1989).

There are numerous modifications of the notion of retract and related notions [comp. *J. Klisowski*, Colloq. Math. 46, 23-35 (1982; Zbl 0503.54022)]. In the present paper the author continues his studies of the notion of contraction, neighbourhood contraction, and related concepts. Let  $A$  be a non-empty subset of a metric compact space  $X$  and  $V$  a neighbourhood of  $A$  in  $X$ . A map  $r: X \rightarrow V$  is a contraction iff  $r(x) = x$  for every  $x \in A$ ; the set  $A$  is a contract of  $X$  iff for every  $V$  such a contraction exists;  $A$  is a neighbourhood contract of  $X$  if it is a contract of arbitrary neighbourhood of  $A$  in  $X$ . A space  $X$  is an absolute (neighbourhood) contract iff for every  $Y$  and every homeomorphism  $h$  of  $X$  onto a closed subset of  $Y$ , the set  $h(X)$  is a (neighbourhood) contract of  $Y$ . It is known that the class AS of absolute contracts coincides with FAR.

The author investigates the set  $F$  of quasiextendable maps of a compactum  $X$  into  $Y$ . Theorem 1.3 says that  $F$  is closed in  $Y^X$ . Theorem 1.4 says that  $Y^X$  is AS if and only if  $Y$  is AS. Further, the author gives some characterizations of the classes AS and ANS.

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**MSC:**

- [54C55](#) Absolute neighborhood extensor, absolute extensor, absolute neighborhood retract (ANR), absolute retract spaces (general properties)
- [54C15](#) Retraction
- [54C20](#) Extension of maps
- [54C35](#) Function spaces in general topology

**Keywords:**

[absolute neighbourhood contract](#); [absolute contract](#); [quasiextendable maps](#)