Bugajewski, Dariusz; **Espínola, Rafael**
Measure of nonhyperconvexity and fixed-point theorems. (English) Zbl 1057.47059
Abstr. Appl. Anal. 2003, No. 2, 111-119 (2003).

The authors introduce the concept of "measure μ of hyperconvexity of a metric space X" in order to generalize the Schauder fixed-point theorem in hyperconvex spaces. Of the various interesting results, we quote only Theorem 3.7. Let A be a nonempty bounded and complete metric space and let $f : A \to A$ be continuous and both α- and μ-contractive. Then f has a fixed point. This paper is well-written and contains most of the terminology it uses.

Reviewer: Carlos R. Borges (Davis)

MSC:

47H10 Fixed-point theorems
54C20 Extension of maps
54E35 Metric spaces, metrizability
54C55 Absolute neighborhood extensor, absolute extensor, absolute neighborhood retract (ANR), absolute retract spaces (general properties)

Keywords:

fixed point; hyperconvex; μ-measure; μ-contractive