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Proximity point properties for admitting center maps. (English) Zbl 1449.54073

Summary: In this work, we investigate a class of admitting center maps on a metric space. We state and prove some fixed point and best proximity point theorems for them. We obtain some results and relevant examples. In particular, we show that, if $X$ is a reflexive Banach space with the Opial condition and $T : C \to X$ is a continuous admitting center map, then $T$ has a fixed point in $X$. Also, we show that, under some conditions, the set of all best proximity points is nonempty and compact.

MSC:
54H25 Fixed-point and coincidence theorems (topological aspects)
54E40 Special maps on metric spaces

Keywords:
admitting center map; nonexpansive map; co-Chebyshev set; best proximity pair

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References:

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