

NOTE ON THE FIXED POINT PROPERTY

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Abstract. In this paper it is proved that absolute approximative retracts and absolute multiretracts spaces have the fixed point property both for singlevalued continuous mappings and multivalued upper semi continuous mappings with R_δ -values.

Key Words and Phrases: fixed point property, approximation theorems, set-valued mappings, absolute retracts, absolute approximative retracts.

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REFERENCES

- [1] K. Borsuk, *Theory of Retracts*, PWN, Warsaw 1967.
- [2] L. Gorniewicz, *Topological Fixed Point Theory of Multivalued Mappings*, Springer, 2006.
- [3] A. Granas, J. Dugundji, *Fixed Point Theory*, Springer, 2003.
- [4] H. Ben-El-Mechaiekh, *Spaces and maps approximation and fixed points*, J. Comp. Appl. Math., **113**(2000), 283-308.
- [5] H. Noguchi, *A generalization of absolute neighbourhood retracts*, Kodai Math. Sem. Rep., **1**(1953), 20-22.
- [6] M.J. Powers, *Fixed point theorems for non-compact approximative ANR-s*, Fundamenta Math., **75**, 61-68.
- [7] R. Skiba, M. Slosarski, *On a generalization of absolute neighbourhood retracts*, Topology Appl., **156**(2009), 697-709.

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