

FIXED POINTS OF GENERALIZED HYBRID MAPPINGS ON L_2 -EMBEDDED SETS IN BANACH SPACES

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Abstract. In this paper, first we generalize the notion of L -embedded sets in Banach spaces, defined by A.T.-M. Lau and Y. Zhang in "Fixed point properties for semigroups of nonlinear mappings and amenability", *Journal of Functional Analysis*, 263 (2012), pp. 2949-2977, to the notion of L_p -embedded sets ($p > 0$). Then, for a given generalized hybrid mapping T , we introduce the concepts of T -Chebyshev radius and T -Chebyshev center, generalizing the concepts of Chebyshev radius and Chebyshev center for nonexpansive mappings. Finally, we study the existence of fixed points of generalized hybrid mappings on L_2 -embedded subsets of a Banach space by using the notions of T -Chebyshev radius and T -Chebyshev center.

Key Words and Phrases: fixed point, generalized hybrid mapping, L_2 -embedded set, Chebyshev center.

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