On The Dependence of Fixed Point Sets of Pseudo-Contractive Multifunctions. Application to Differential Inclusions

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Abstract: A weakened notion of multivalued contraction mapping is introduced. Some fixed point results relying on this notion are presented. The associated fixed points sets are shown to enjoy a Lipschitzian behaviour with respect to the graphs of the multifunctions. Applications are given to the dependence of solutions of differential inclusions of the form $\dot{x}(t) \in R(t, x(t))$ on initial values or on the right-hand sides or on parameters.