ON RANDOM SET-VALUED FUNCTIONAL INTEGRO DIFFERENTIAL EQUATIONS WITH THE SECOND TYPE HUKUHARA DERIVATIVE

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Abstract. In this paper, we study the initial valued problem for random set-valued integro functional differential equations with the second type Hukuhara derivative. By using the techniques of successive approximations, the existence and uniqueness of solutions are established. Two kinds of boundedness of the solution are also established. In addition, the problem at least one solution under some conditions is proven and two examples illustrate the results.

Keywords. Random set-valued variable, set differential equations, integro differential equations, Hukuhara derivative, Picard type approximations.

2010 Mathematics Subject Classification: 34F05, 34G20, 34A12.

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