RANDOM SET–VALUED FUNCTIONAL DIFFERENTIAL EQUATIONS
WITH THE SECOND TYPE HUKUHARA DERIVATIVE

H O V U A N D L E S I D O N G

Abstract. This paper concerns with the initial value problem for random set-valued functional
differential equations with the second type Hukuhara derivative (RSFDEs). By using the tech-
niques 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 and phrases: Random set-valued variable, set-valued functional differential equations, suc-
cessive approximation, at least one solution, second type Hukuhara derivative.

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