

Łuczak-Kumorek, Elżbieta

The existence theorem for neutral functional-differential inclusions. (English) Zbl 0762.47017

Demonstr. Math. 23, No. 2, 385-393 (1990).

Introduction: The aim of this paper is to present the existence theorem for functional- differential inclusions of the form

$$\frac{d}{dt}D(t, x_t) \in F(t, x_t),$$

where F is a multivalued mapping having a Carathéodory selector and taking as its values nonempty closed compact but not necessarily convex or nonempty closed convex subsets of R^n and D is a single-valued mapping with values in R^n . We extend the results of *J. K. Hale* [*J. Diff. Equations* 9, 168–181 (1971; [Zbl 0213.36901](#))] on the functional-differential inclusions of neutral type.

MSC:

[47E05](#) General theory of ordinary differential operators

[34K40](#) Neutral functional-differential equations

[34A40](#) Differential inequalities involving functions of a single real variable

Keywords:

existence theorem for functional-differential inclusions; multivalued mapping; Carathéodory selector