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Almost periodicity and stability for solutions to functional differential equations with infinite delay. (English) Zbl 0879.34073

Differ. Integral Equ. 9, No. 6, 1225-1252 (1996).

The subject of the paper is almost periodicity and stability of solutions to a Banach space valued functional differential equation with infinite delay. While the linear part of the equation is a multivalued accretive operator, the nonlinear part with delay is assumed to be Lipschitz continuous. Under local conditions the semigroup method is applied to derive almost periodicity properties and stability results for solutions of the equation in question. The general results are then applied to the delay logistic equation from population dynamics and the Goodwin oscillator with infinite delay as a model for biochemical reaction sequences.

Reviewer: Ivan Straškraba (Praha)

MSC:

34K30 Functional-differential equations in abstract spaces
34K20 Stability theory of functional-differential equations
34K25 Asymptotic theory of functional-differential equations

Cited in **9** Documents

Keywords:

functional differential equation; infinite delay; almost periodicity; stability

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