

Representation formulas of the First Variation of Solution for One Class of Neutral Functional-Differential Equation

Tea Shavadze

A controlled neutral functional-differential equation is considered, whose right-hand side is linear with respect to the value of derivative of unknown function in the past. The local and global representation formulas for the main part of the increment of solution, i.e. for the first variation of solution, in the form of a linear operator have been established. The local formula corresponds to the discontinuous initial condition, and the global formula corresponds to the continuous initial condition. In the formulas the effects of perturbation of the initial data and discontinuous-continuous initial conditions are revealed.

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