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On the Existence of a Solution of One Class of the Quasi-linear Neutral Optimal Problem

In the paper, we consider an optimal control problem for a controlled quasi-linear neutral differential equation with constant delay parameters, where the equation is linear with respect to the history of the derivative (velocity). The optimal control problem, referred to as a quasi-linear neutral optimal problem, is studied with a general functional and phase constraints. Existence theorems for solutions of the optimal problem are established. Under a solution is understood collection of the delay parameters and the control function.