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OPTIMAL CONTROL PROBLEM WITH CONTROL
AT THE HIGH COEFFICIENTS FOR THE
NONLINEAR HYPERBOLIC EQUATION WITHOUT
UNIQUENESS THEOREM OF SOLUTION OF
INITIAL-BOUNDARY VALUE PROBLEM

Abstract

An optimal control problem with a control in coefficients for higher derivatives is considered for one non-linear hyperbolic equation without a uniqueness theorem on the solution of an initial-boundary value problem. Solvability of an optimal control problem is proved, necessary conditions of optimality for appropriate approximate solution of the problem is derived.