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GENERALIZATION OF MULTIPOINT
BOUNDARY-VALUE PROBLEMS OF
BITSADZE-SAMARSKI AND SAMARSKI-IONKIN
TYPE FOR FOURTH ORDER LOADED
HYPERBOLIC INTEGRO-DIFFERENTIAL
EQUATIONS AND THEIR OPERATOR
GENERALIZATION

Abstract

In the present paper the generalization of multipoint boundary-value problems of Bitsadze-Samarski and Samarski-Ionkin type for fourth order loaded hyperbolic integro-differential equations is considered. The considered non-local boundary-value problem is reduced to the operator equation in the S.L.Sobolev space of $W_p^{(2,2)}(G)$ type with the dominating derivatives $D_x^2 D_y^2$. In the paper the fundamental solutions for this operator equation were first researched.