

ISSUES OF BASIS PROPERTY RELATED TO THE CHOICE OF
ASSOCIATED FUNCTIONS OF DIFFERENTIAL OPERATORS

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Abstract. This publication presents the research conducted on the problem of choosing associated functions of ordinary differential operators of higher orders. Necessary conditions for the unconditional basis of the given transformed system were defined. For systems consisting of root functions of differential operator it is shown that the anti-a priori estimates without the positive power in the right-hand side of inequality are sufficient conditions for unconditional basis property in the space of square summable functions for any choice of associated functions. A new definition of associated functions of linear operators in Hilbert space was proposed.

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Key words. Differential operators, linear operators, associated functions, Hilbert space.

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