

A TWO-SIDED ERROR ESTIMATE FOR A REGULARIZING METHOD BASED ON M.M. LAVRENT'EV'S METHOD**V. P. Tanana, A. I. Sidikova**

Received January 14, 2014

We consider an operator equation of the first kind with error in the operator and in the right-hand side of the equation. The method is a function of this operator depending on a positive parameter α . A lower estimate of a method of solving this equation for any value of α is obtained. A regularizing method based on Lavrent'ev's method is constructed, and a two-sided error estimate is obtained for this method. Discrete approximations of Lavrent'ev's method are constructed. Error estimates are obtained for these approximations. The discrete approximations were further used for a perturbation of the operator in the equation.

Keywords: operator equation, regularization, error estimation, ill-posed problem.

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Cite this article as:

V.P. Tanana, A.I. Sidikova, A two-sided error estimate for a regularizing method based on M.M. Lavrent'ev's method, *Tr. Inst. Mat. Mekh. UrO RAN*, 2015, vol. 21, no. 1, pp. 238–249.