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Kontakt/Contact

[Digizeitschriften e.V.](#)
SUB Göttingen
Platz der Göttinger Sieben 1
37073 Göttingen

✉ info@digizeitschriften.de

Summary

ERROR ESTIMATES OF APPROXIMATE SOLUTIONS OF INTEGRAL EQUATIONS

VLASTIMIL PTÁK, Praha.

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The starting point of the present investigations is the paper of L. V. KANTOROVITCH [1]. Methods of Functional Analysis are applied to build up a general schema which may be used to estimate the error of different approximate methods of solution of integral equations. If X is a Banach space where an equation $Ax = y$ is to be solved, we consider a subspace $\tilde{X} \subset X$ and the approximate equation $PA\tilde{x} = Py$, P being a projection of X on \tilde{X} . A method is developed to obtain an estimate of the difference between the exact solution x and the approximate solution \tilde{x} .