



## THE FINITE $\beta$ -LAPLACE INTEGRAL TRANSFORM AND ITS APPLICATIONS

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**Abstract.** The  $\beta$ -Laplace integral transform is a kind of improper integral therefore it is not necessary that it converges for every function especially non-exponential order function and therefore this becomes a significant problem. The aim of this paper is to establish an alternative solution of the problem by introducing finite  $\beta$ -Laplace integral transform which is a kind of integral on bounded interval as well a very effective generalization of the both Laplace and the  $\beta$ -Laplace integral transform.

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Communicated by Editors; Received May 31, 2024

AMS Subject Classification: 44A10, 44A35, 44A99.

Keywords: Laplace Integral Transform,  $\beta$ -Laplace Integral Transform, Convolution.