Convolution Structure for Two Dimensional Fourier-Laplace Transform

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Abstract:

The integral transforms method is one of the most easy and effective methods for solving problems arising in Mathematical Physics, Applied Mathematics and Engineering Science which are defined by differential equations, difference equations and integral equations. Integral Transform convert the complicated problems into simpler one.

This paper is concerned with the generalization of Two-Dimensional Fourier-Laplace transform in the distributional sense. The main aim of this paper is to prove the properties of convolution and Convolution theorem for Two Dimensional Fourier-Laplace transform which will useful for solving differential and integral equations.

Keyword: Fourier Transform, Laplace Transform, Fourier-Laplace Transform, Generalized function, Testing function space.