

A STUDY OF GENERALIZED PATHWAY TRANSFORM

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ABSTRACT

In this paper we introduce and study an integral transform (\tilde{T} -transform) whose kernel is the function $I_3(z, t, v, \rho, \mu, a, \alpha)$ which is generalization of pathway model introduced by Mathai [3]. First we obtain the basic properties of \tilde{T} -transform. Next, we give connections of \tilde{T} -transform with Mellin transform, Laplace transform, H-transform and Saigo Operators. Further, we find images of the product of S_V^U -polynomial, H-function and \bar{H} -function under this transform. For the sake of illustration, we obtain images of the polynomial and functions: Cesaro polynomial, Lorenzo- Hartly G- function and generalized Hurwitz-Lerch Zeta function in our transform of study. On account of the most general nature of the functions occurring herein, our findings provide interesting unifications and extensions of a number of results lying scattered in the literature.

KEYWORDS: Cesaro Polynomial, Lorenzo- Hartly G- Function and Generalized Hurwitz-Lerch Zeta Function