

PATHWAY OPERATOR AND PATHWAY TRANSFORM OF GENERALIZED BESSEL FUNCTION

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Abstract: The current study aims to describe the generalized Bessel function's pathway fractional integral operator. The following noteworthy special cases have been brought forward for consideration. The pathway transform of the generalized Bessel function has also been developed.

Keywords and Phrases: Bessel function, Bessel-Maitland function, Wright generalized hypergeometric function.

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1. Introduction and Preliminaries

Several authors discovered a number of intriguing integral operators comprising multiple kinds of special functions that could be useful in many diverse fields of physics, engineering, and applied sciences. Jain et al. [7], Singh et al. [22], Ghayasuddin et al. [6], Khan et al. [11], and we may refer to [3], [5] & [10], etc. Recently, Bessel function theory has become inextricably linked to the theory of certain forms of differential equations. The reader might refer to Watson [24] for a full overview of Bessel function applications. In this section, we are conscious