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On the Iman Transform and Systems of Ordinary Differential Equations

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Abstract: *In this paper we introduce some properties and definition of the new integral transform, called Iman transform. Farther, we use Iman transform to solve systems of ordinary differential equations.*

Keywords: Iman transform-system of differential equations.

REFERENCES

[1]. I. A. Almardy, S. Y. Eltayeb , S. H. Mohamed , M. A. Alkerr , A. K. Osman, H. A. Albushra, A Comparative Study of Iman and Laplace Transforms to Solve Ordinary Differential Equations of First and Second Order, ISSN 1, Volume 3, (2023), pp323-328. International Journal of Advanced Research in Science, Communication and Technology (IJARSCT).

[2]. Lokenath Debnath and D. Bhatta. Integral Transform and Their Application Second Edition, Chapman & Hall /CRC (2006).

[3]. A.Kilicman and H.E.Gadain. An application of double Laplace transform and Sumudu transform, Lobachevskii J. Math.30 (3) (2009), pp.214-223.

[4]. J. Zhang, A Sumudu based algorithm for solving differential equations, Comp. Sci. J. Moldova 15(3) (2007), pp – 303-313.

[5]. Hassan Eltayeb and Ademkilicman, A Note on the Sumudu Transforms and Differential Equations, Applied Mathematical Sciences, VOL, 4,2010, no.22,1089-1098

[6]. Kilicman A. & H. ELtayeb. A Note on Integral Transform and Partial Differential Equation, Applied Mathematical Sciences, 4(3) (2010), PP.109-118.

[7]. Hassan ELtayeh and Ademkilicman, on Some Applications of a New Integral Transform, Int. Journal of Math. Analysis, Vol, 4, 2010, no.3, 123-