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DOUBLE MELLIN INTEGRAL TRANSFORM WITH APPLICATIONS TO PROBABILITY AND STATISTICS

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Abstract

The use of Fourier transform in the probability for sums and differences of random variables is well known, we use the Double Mellin integral transforms to derive theory in statistics and probability of two continuous random variables X and Y. We presents the relationship between the Double Laplace and Double Mellin integral transforms and discuss the use of these integral transforms in deriving densities for algebraic combination of random variables. Results are illustrated with examples.

Keywords : Double Laplace Transform, Double Mellin Integral Transform, Statistics, Probability
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