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THE LAPLACE INTEGRAL TRANSFORM WITH APPLICATIONS TO STATISTICS AND PROBABILITY

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Abstract

The Fourier integral transform is well known for finding the probability density for sums and differences of random variables. We use the Mellin integral transform to derive different results and properties by statistics and probability density of one continuous random variable. We also discuss the relationship between the Laplace and Mellin integral transforms and use of these integral transforms we derive density for algebraic combination of random variables. Results are illustrated with examples.

Key Words : *Laplace, Mellin and Fourier Transforms, Probability densities, Random Variables and Applications in Statistics.*

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