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Linear combination, product and ratio of normal and logistic random variables. (English)

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Kybernetika 41, No. 6, 787-798 (2005).

Summary: The distributions of linear combinations, products and ratios of random variables arise in many areas of engineering. In this note, the exact distributions of $\alpha X + \beta Y$, $|XY|$ and $|X/Y|$ are derived when X and Y are independent normal and logistic random variables. The normal and logistic distributions have been two of the most popular models for measurement errors in engineering.

MSC:

62E15 Exact distribution theory in statistics

62P30 Applications of statistics in engineering and industry; control charts

Cited in 1 Document

Keywords:

[logistic distribution](#); [product](#); [ratio](#)

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