The Sin New XLindley Distribution

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Abstract

In this paper, we introduce a novel lifetime distribution called the Sine Modified New X-Lindley (SMNXL) distribution. This distribution is constructed by applying the sine transformation to the cumulative distribution function (CDF) of the New X-Lindley distribution, thereby adding an additional shape parameter that significantly enhances flexibility.

Keywords

New XLindley distribution, hazard function, fuzzy reliability analysis, quantile function.