

# **On Some Sampling Distributions for Skew-Normal Population and its Applications**

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## **Abstract**

Recently, there are intense investigations about generalizing normal distributions. Among them, the skew-normal distribution retains many statistical properties of the normal distribution. In this talk, first some basic properties of the skew-normal distribution and its related research are reviewed. Next, we study properties of sampling distributions for skew-normal population, including explicit forms of the probability density function and cumulative density function of the sample mean, and the joint moment generating function of sample mean and sample variance, etc. Finally, an application of the distribution of skew-normal sample mean to control chart will be provided.