

# The Plausibility Regions for Shape Parameters under Multivariate Skew Normal Settings Based on Inferential Models

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## Abstract

Inference on shape parameter is a challenge issue for skew normal family, especially under multivariate skew normal settings. In this talk, the plausibility regions for shape parameters of multivariate skew normal family are constructed by Inferential Models (IMs) and generalized IMs with known location parameters and scale parameters. For illustration of our results, simulation studies are proceeded as well.

**Keywords:** Multivariate Skew-normal distributions, Plausibility regions, Inferential Models, Shape parameters