

Selection models under generalized symmetry settings

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Abstract An active stream of literature has followed up the idea of skew-elliptical densities initiated by Azzalini and Capitanio (J. R. Stat. Soc. Ser. B 61:579–602, 1999). Their original formulation was based on a general lemma which is however of broader applicability than usually perceived. This note examines new directions of its use, and illustrates them with the construction of some probability distributions falling outside the family of the so-called skew-symmetric densities.

Keywords Central symmetry · Gamma distribution · Probability integral transform · Skew-normal distribution · Skew-symmetric distributions · Symmetric functions · Symmetry