

CONTINUITY OF SCALE PARAMETER ESTIMATORS WITH RESPECT
TO STOCHASTIC ORDERS

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Abstract: Lehmann and Rojo [8] proposed a concept of invariance of stochastic orders and related probability metrics with respect to increasing transformations of random variables. Bartoszewicz and Benduch [3] and Bartoszewicz and Frąszczak [4] applied a concept of Lehmann and Rojo to new settings. In the paper these results are applied to the problem of robustness in the sense of Zieliński [11], [12]. Metrics related to some stochastic orders are used to study the continuity (robustness) of scale parameter estimators when contaminations of the models are generated by stochastic orders. The exponential model is considered in detail.

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