PROBABILITY
AND
MATHEMATICAL STATISTICS
Vol. 35, Fasc. 2 (2015), pp. 267–284

LIMIT THEORY FOR BIVARIATE CENTRAL AND BIVARIATE INTERMEDIATE DUAL GENERALIZED ORDER STATISTICS

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Abstract: Burkschat et al. (2003) have introduced the concept of dual generalized order statistics (dgos) to unify several models that produce descendingly ordered random variables (rv's) like reversed order statistics, lower k-records and lower Pfeifer records. In this paper we derive the limit distribution functions (df's) of bivariate central and bivariate intermediate m-dgos. It is revealed that the convergence of the marginals of the m-dgos implies the convergence of the joint df. Moreover, we derive the conditions under which the asymptotic independence between the two marginals occurs.

2000 AMS Mathematics Subject Classification: Primary: 62G30; Secondary: 62E20.

Keywords and phrases: Dual generalized order statistics, dual generalized central order statistics, dual generalized intermediate order statistics.