Lower bounds on expectations of generalized order statistics from restricted families of distributions

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We present the lower mean-variance bounds on the expectations of the generalized order statistics which are based on the parent distributions with the decreasing generalized failure rate (DGFR). The particular cases are families of distributions with the decreasing density (DD) and decreasing failure rate (DFR). The bounds are obtained with use of the projection method applied to the functions satisfying some specified conditions and appropriately chosen convex cones. We also provide the attainability conditions.

Note: Joint work with **Mariusz Bieniek** (Institute of Mathematics, Maria Curie Skłodowska University).

References

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