

## A GENERALIZED MATHARU-AUJLA INEQUALITY

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*Abstract.* In this paper, we will show a generalized Matharu-Aujla log majorization inequality via an operator order preserving inequality, which extends the related results.

*Mathematics subject classification (2010):* 47A63.

*Keywords and phrases:* Log majorization, generalized Furuta inequality, Matharu-Aujla inequality.

### REFERENCES

- [1] T. ANDO, F. HIAI, *Log majorization and complementary Golden-Thompson type inequality*, Linear Algebra Appl. **197** (1994), 113–131.
- [2] T. FURUTA, *An extension of order preserving operator inequality*, Math. Inequal. Appl. **13**, 1 (2010), 49–56.
- [3] T. FURUTA, *Extensions of inequalities for unitarily invariant norms via log majorization*, Linear Algebra Appl. **436** (2012), 3463–3468.
- [4] F. KUBO, T. ANDO, *Means of positive linear operators*, Math. Ann. **246** (1980), 205–224.
- [5] J. S. MATHARU, J. S. AUJLA, *Some inequalities for unitarily invariant norms*, Linear Algebra Appl. **436** (2012), 1623–1631.