

Semiparametric robust mean estimations based on the orderliness of quantile averages

Tuban Lee

This manuscript was compiled on June 7, 2023

semiparametric | mean-median-mode inequality | asymptotic | unimodal
| Hodges–Lehmann estimator

1 **Inequalities related to weighted averages**

2 So far, it seems plausible that the bias of a reasonable weighted
3 average should be related to its degree of robustness, since it
4 is a linear combination of quantile averages.

5 **Data Availability.** Data for Figure ?? are given in SI Dataset
6 S1. All codes have been deposited in [GitHub](#).

7 **ACKNOWLEDGMENTS.** I sincerely acknowledge the insightful
8 comments from the editor which considerably elevated the lucidity
9 and merit of this paper.

DRAFT