## Near-consistent robust estimations of moments for unimodal distributions

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This manuscript was compiled on May 24, 2023

- Descriptive statistics for parametric models currently heavily rely on
- 2 the accuracy of distributional assumptions. Here, leveraging the in-
- variant structures of unimodal distributions, a series of sophisticated
- 4 yet efficient estimators, robust to both gross errors and departures
- from parametric assumptions, are proposed for estimating mean and
- 6 central moments for common unimodal distributions. This article also
- 7 illuminates the understanding of the common nature of probability
- 8 distributions and the measures of them.

orderliness | invariant | unimodal | adaptive estimation | U-statistics

- **Data Availability.** Data for Table ?? are given in SI Dataset S1.
- All codes have been deposited in GitHub.
- 3 ACKNOWLEDGMENTS. I gratefully acknowledge the construc-
- 4 tive comments made by the editor which substantially improved
- 5 the clarity and quality of this paper.