Near-consistent robust estimations of moments for unimodal distributions

Tuban Lee

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- 1 Descriptive statistics for parametric models currently rely heavily
- 2 on the accuracy of distributional assumptions. Here, leveraging the
- 3 structures of parametric distributions and their central moment ker-
- 4 nel distributions, a series of sophisticated yet efficient estimators,
- robust to both gross errors and departures from parametric assump-
- 6 tions, is proposed for estimating the mean and central moments of
- 7 common unimodal distributions. This article also illuminates the un-
- 8 derstanding of the common nature of probability distributions and
- 9 the measures of them.
- Theorem .1.
- $_{2}$ Proof.