

Near-consistent robust estimations of moments for unimodal distributions

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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 class of estimators, consistent simultaneously for
5 both a semiparametric distribution and a distinct parametric distribu-
6 tion, is proposed. These estimators are robust to both gross errors
7 and departures from parametric assumptions, demonstrating excel-
8 lent performance when estimating the mean and central moments
9 of common unimodal distributions. This article also illuminates the
10 understanding of the common nature of probability distributions and
11 the measures of them.

1 Theorem .1.

2 *Proof.*

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