

Near-consistent robust estimations of moments for unimodal distributions

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1 **A. Invariant Moments.** All commonly used robust location es-
2 timators are symmetric, and therefore, asymptotically coin-
3 cide with the population mean in any symmetric distribu-
4 tions provided that the mean is finite. A γ -weighted Hodges-
5 Lehmann mean ($\text{WHLM}_{k,\epsilon,\gamma,n}$) can achieve consistency in any
6 γ -symmetric distribution with a finite mean.

DRAFT