

Additive Noise Resistance of Location Estimators

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Abstract: Estimators are compared under a model in which a symmetric signal is distorted by a small amount of additive noise. The comparisons are in terms of the local rate of change of the asymptotic bias. This robustness is determined by functional derivatives, but as a mode of comparison, it is more analogous to Pitman Relative Efficiency than it is to the Influence Function. The comparison is applied to some common affine-equivariant univariate and bivariate location estimators.