Robust Covariance Matrix Estimation with Canonical Correlation Analysis.

This paper gives three easily computed highly outlier resistant robust $\sqrt{n}$ consistent estimators of multivariate location and dispersion for elliptically contoured distributions with fourth moments. When the data is from a multivariate normal distribution, the dispersion estimators are also consistent estimators of the covariance matrix. Outlier detection and robust canonical correlation analysis are presented as applications. (Received September 22, 2012)