

The thesis deals with R-estimators, estimators based on ranks. They were originally proposed by Hodges and Lehmann [7] as inversions of the rank tests. Not only the definition used by Hodges and Lehmann, but also the one used in later literature is formulated. Basic characteristics of some rank statistics are described and the explicit forms of the corresponding R-estimators and confidence intervals are derived. Their basic properties as unbiasedness, translation equivariance, efficiency, robustness are studied. The behavior of R-estimators is then illustrated on simulated data and on several examples.