

Robust estimation of circular parameters

ABSTRACT

Motorcycle has been one of the vital modes of transportation worldwide. It is quite difficult to identify the risk Researchers interest to develop methods of robust estimation. These methods can be used when the data have outliers or not satisfy the condition of classical methods. However, few researchers suggest robust estimation of circular data. In this paper, we propose robust estimation of circular variance and mean resultant length. The proposed robust estimation depends on extending trimmed procedure by find robust formula for trimming. Simulation results and practical example show that the proposed procedure for the circular variance and mean resultant length are better than classical methods for different ratios of outliers.

Keyword: Outliers; Robust statistics; Circular variance; Mean resultant length; Resultant; Length