Robustness of Spacing-Based Power Divergence Statistics

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The robustness of spacing-based power divergence statistics, based on the asymptotic results introduced in [1, 2], are studied. The generated data, with normal distribution and contamination from 5 to 40 percent, are used for the computation of the statistics for selected representative orders of $\alpha > -1/2$. Rejection of hypothesis $H0$ was used as criterion for robustness. New version of program package PODI-STAT [3] was developed for the computation of the simulation study.

References

[1] I. Vajda and E.C. van der Meulen. Limit theorems and asymptotic equivalence for a class of spacings-based ϕ-disparity statistics. Abstract, *Prague Stochastics 2010* .

[2] I. Vajda and E.C. van der Meulen. *Goodness-of-fit Criteria based on Observations Quantized by Hypothetical and Empirical Percentiles*. Chapter 23 of *Handbook of Fitting Statistical Distributions with R* (eds. Z.Karian and E.J.Dudewicz), CRC Press, 2010.

[3] P. Boček and I. Vajda and E.C. van der Meulen. Asymptotic properties and numerical comparison spacings-based power divergence statistics. Abstract, *Prague Stochastics 2010* .

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