

Ahmadi, Jafar; Balakrishnan, N.

On Pitman's measure of closeness of k -records. (English) Zbl 1221.62074

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Summary: Pitman closeness of both the upper and lower k -record statistics to the population quantiles of a location-scale family of distributions is studied. For the population median, the Pitman-closest k -record is also determined. In the case of symmetric distributions, the Pitman closeness probabilities of k -record statistics are shown to be distribution-free, and explicit expressions are also derived for these probabilities. Exact expressions are derived for the required probabilities for uniform and exponential distributions. Numerical results are given for these families and also the Pitman-closest k -record is determined.

MSC:

[62G32](#) Statistics of extreme values; tail inference

[62G05](#) Nonparametric estimation

[62E15](#) Exact distribution theory in statistics

[65C60](#) Computational problems in statistics (MSC2010)

Cited in **13** Documents

Keywords:

location-scale family; Pitman closeness; Pitman-closest estimator; median; quantiles; records; k -record statistics

Full Text: [DOI](#)

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