About some old and new non-parametric control charts

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SUMMARY

We are interested here in the design of non-parametric control charts which are powerful especially for positive random variables (say, for instance, lifetime distributions). We start by providing a short review of non-parametric control charts based on some functional of precedence statistics (this includes the Wilcoxon-Mann-Whitney statistic in particular) [1]. Then we propose some what seems to be a new functional leading to a new control chart. The power of all these control charts is studied using simulation since computations are not always tractable.

Keywords: precedence statistic, Wilcoxon-Mann-Whitney statistic, numerical studies

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References


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