

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

AMS Classification: 62G10, 62P30

References

- [1] N. BALAKRISHNAN & H.K.T. NG (2006). *Precedence-type tests and applications*. Wiley, New-York.

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