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Clear effects in the 2^{n-p} combined design. (English) Zbl 1109.62068

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Summary: The technique of semifolding is used to develop the 2^{n-p} designs. Based on the initial analysis, some factors may be more important than others. In other words, the results from analyzing the original experiment may suggest a specific set of effects to be de-aliased. On the other hand, some previously acquired information might be available for specific factors. In these cases, one may desire to isolate the main effects of these factors and each of their two-factor interactions in the experiments. Four rules that are presented in this article can systematically isolate effects of potential interest, which should serve well for researchers in all disciplines. The combined design, by semifolding, provides estimates of the interactions that involve specific factors so that the alias chains of the two-factor interactions can be broken.

MSC:

62K15 Factorial statistical designs

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Keywords:

alias chain; defining contrast subgroup; semifolding; wordlength

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References:

- [1] Box G. E. P., *J. Roy. Statist. Soc. Ser. B* 13 pp 291– (1951)
- [2] DOI: 10.2307/1266553 · doi:10.2307/1266553
- [3] DOI: 10.2307/2281648 · Zbl 0105.12201 · doi:10.2307/2281648
- [4] DOI: 10.2307/2527455 · Zbl 0105.12101 · doi:10.2307/2527455
- [5] John P. W. M., *Statistic Design and Analysis of Experiments* (1971)
- [6] DOI: 10.1080/03610920008832600 · Zbl 0991.62055 · doi:10.1080/03610920008832600
- [7] DOI: 10.1198/004017003188618779 · doi:10.1198/004017003188618779
- [8] DOI: 10.2307/1271444 · Zbl 0999.62058 · doi:10.2307/1271444
- [9] Montgomey D. C., *Design and Analysis of Experiments.*, 4. ed. (2001)
- [10] Ting , L. H. (2000). Semifolding in Fractional Factorial Design. Master thesis , Department of Mathematics, National Kaohsiung Normal University .
- [11] Wu C. F. J., *Experiment: Planning, Analysis, And Parameter Design Optimization.* (2000)

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