

Cheng, Shao-Wei; Wu, C. F. J.; Wu, Huaiqing

Finding defining generators with extreme lengths. (English) Zbl 1039.62071
J. Stat. Plann. Inference 113, No. 1, 315-321 (2003).

Summary: In some practical situations the choice of defining generators matters even for the same defining contrast subgroup. Two such examples are blocking schemes for full and fractional factorial designs and split-plot fractional factorial designs. We propose an algorithm to find defining generators with extreme lengths for any s^{n-k} designs, s being a prime power. Some illustrations of the method are given.

MSC:

62K15 Factorial statistical designs
62K10 Statistical block designs

Cited in 1 Document

Keywords:

Defining contrast subgroup; Blocked fractional factorial design; Minimum aberration; Split-plot design

Full Text: [DOI](#)

References:

- [1] Cheng, C.S., Run orders of factorial designs, (), 619-633 · [Zbl 1373.62407](#)
- [2] Cheng, C.S.; Steinberg, D.M., Trend robust two-level factorial designs, *Biometrika*, 78, 325-336, (1991) · [Zbl 0733.62082](#)
- [3] Fries, A.; Hunter, W.G., Minimum aberration $2^{\text{k-p}}$ designs, *Technometrics*, 22, 601-608, (1980) · [Zbl 0453.62063](#)
- [4] Huang, P.; Chen, D.; Voelkel, J.O., Minimum-aberration two-level split-plot designs, *Technometrics*, 40, 314-326, (1998) · [Zbl 1064.62552](#)
- [5] Sitter, R.R.; Chen, J.; Feder, M., Fractional resolution and minimum aberration in blocked $2^{\text{n-k}}$ designs, *Technometrics*, 39, 382-390, (1997) · [Zbl 0913.62073](#)
- [6] Sun, D.X.; Wu, C.F.J.; Chen, Y., Optimal blocking schemes for 2^{n} and 2n-p designs, *Technometrics*, 39, 298-307, (1997) · [Zbl 0891.62055](#)
- [7] Wu, C.F.J.; Hamada, M., *Experiments: planning, analysis, and parameter design optimization*, (2000), Wiley New York · [Zbl 0964.62065](#)
- [8] Wu, C.F.J.; Zhang, R., Minimum aberration designs with two-level and four-level factors, *Biometrika*, 80, 203-209, (1993) · [Zbl 0769.62058](#)

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.