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Some results on fractional factorial split-plot designs with multi-level factors. (English)

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Summary: Fractional factorial split-plot (FFSP) designs have received much attention in recent years. In this article, the matrix representation for FFSP designs with multi-level factors is first developed, which is an extension of the one proposed by *D. R. Bingham* and *R. R. Sitter* [Ann. Stat. 27, No. 4, 1240–1255 (1999; Zbl 0957.62065)] for the two-level case. Based on this representation, periodicity results of maximum resolution and minimum aberration for such designs are derived. Differences between FFSP designs with multi-level factors and those with two-level factors are highlighted.

MSC:

62K15 Factorial statistical designs

15A99 Basic linear algebra

Cited in 4 Documents

Keywords:

fractional factorial design; maximum resolution; minimum aberration; split-plot design

Full Text: DOI

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