

Ke, Weiming; Tang, Boxin; Wu, Huaiqing

Compromise plans with clear two-factor interactions. (English) Zbl 1086.62083
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Summary: In a 2^{m-p} design of resolution IV, some two-factor interactions (2fi's) may be important and should be estimated without confounding with other 2fi's. Four classes of compromise plans that specify certain 2fi's to be important have been discussed in the literature. Compromise plans are said to be clear if they are of resolution IV and all the specified 2fi's are clear. A 2fi is clear if it is not aliased with any main effect or any other 2fi. Clear compromise plans allow joint estimation of all main effects and these clear 2fi's under the weak assumption that all three-factor and higher order interactions are negligible. We study the existence and characteristics of clear compromise plans of classes one to four, and give a catalog of clear compromise plans of 32 and 64 runs.

MSC:

62K15 Factorial statistical designs

Cited in **10** Documents

Keywords:

alias set; clear compromise plan; defining contrast subgroup; fractional factorial design; requirement set; resolution