

## Requirements on Locating Arrays in Practical Experimentation

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Locating arrays have been proposed as an experimental design to screen for factors that significantly impact a response. When applied to screening performance in engineered systems, some practical issues arise that impose additional requirements on the locating array. One example is outliers or responses that are missing for a test. This can result in the array losing its locating property and hence its ability to screen. Therefore a new parameter, *separation*, is introduced to increase the number of witnesses to an interaction. Another example is that of factors with high numbers of levels; this has led to an idea of *grouping*. This talk presents new combinatorial requirements on locating arrays that arise from their use in real engineered systems.

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