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Optimal design, analysis and optimization in the presence of random effects using Minitab DoE by Effex platform

Minitab DoE by Effex platform has been expanded to handle random blocks and complex split-plot structures with up to five levels of difficult-to-change factors. In this talk, we will first explain how random factors are considered when generating an optimal design. Then, we will explain how to assess the trade-off between run size and the quality of competing optimal design candidates. Next, we will present the all-subset model selection algorithm, which has been adapted to handle random factor structures, and we will detail our mixed model estimation procedure. Finally, we will demonstrate how to optimize one or more responses simultaneously using interactive graphs and analytical methods. The presented design generation, analysis, and optimization procedures in the presence of random effects will be illustrated using relevant industrial examples.

Special/ Invited session

Software Session

Classification

Mainly application

Keywords

Design of Experiments, Random Effects, Split-plot designs

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