Coverings and light designs

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Abstract

Light designs require less observations than the usual ones for experiences with the same factors for which we have the same number of levels. We now use a technique based on commutative Jordan algebras to derive light models, the coverings technique. Basically we select sub-vectors from the observations vectors of an usual model in such a way that its sets of treatments is conveniently covered, which designates the technique's name. Commutative Jordan algebras provide the tools for a proper choice of sub-vectors.

We will apply this technique to models with Commutative Orthogonal Block Structure (COBS) to derive the corresponding light models.

Keywords

Commutative Jordan algebras, COBS, Inference, Light designs.

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