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The Connection between Mixed-Level OMARS Designs and Orthogonal Mixed-Level Designs

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Orthogonal minimally aliased response surface or OMARS designs are an extensive family of experimental designs, bridging the gap between definitive screening designs and traditional response surface designs. Their technical properties render OMARS designs suitable to combine a screening experiment and a response surface experiment in one. The original OMARS designs are intended for experimentation involving three-level quantitative factors only. Recently, however, mixed-level OMARS designs were introduced to study three-level quantitative factors and two-level quantitative or categorical factors simultaneously. An even more recent addition to the set of orthogonal designs available is the family of orthogonal mixed-level (OML) designs. In this presentation, we discuss the connection between OMARS designs and OML designs. We conclude that all OMARS designs are OML designs, but not all OML designs are OMARS designs. We also discuss the combinatorial construction of certain types of three-level OMARS designs.

Type of presentation

Talk

Classification

Mainly methodology

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