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## **A Class of Saturated Mixed Level Designs for Even Numbers of Runs**

*Monday, 16 September 2024 14:55 (20 minutes)*

Screening experiments often require both continuous and categorical factors. In this talk I will introduce a new class of saturated main effects designs containing  $m$  three-level continuous factors and  $m - 1$  two-level discrete or continuous factors in  $n = 2m$  runs, where  $m \geq 4$ . A key advantage is that these designs are available for any even  $n \geq 8$ . With effect sparsity a few quadratic effects are identifiable. I will demonstrate three methods of construction depending on whether  $n$  is a multiple of 8, a multiple of 4 but not 8, or a multiple of 2 but not 4 or 8.

### **Type of presentation**

Talk

### **Classification**

Mainly methodology

### **Keywords**

Conference matrix, Hadamard matrix, Definitive Screening Design

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