



Contribution ID: 94

Type: **not specified**

## **A Mixed Integer Optimization Approach for Model Selection in Screening Experiments**

*Monday, June 27, 2022 11:30 AM (30 minutes)*

After completing the experimental runs of a screening design, the responses under study are analyzed by statistical methods to detect the active effects. To increase the chances of correctly identifying these effects, a good analysis method should provide alternative interpretations of the data, reveal the aliasing present in the design, and search only meaningful sets of effects as defined by user-specified restrictions such as effect heredity. This talk presents a mixed integer optimization strategy to analyze data from screening designs that possesses all these properties. We illustrate our method by analyzing data from real and synthetic experiments, and using simulations.

### **Keywords**

Best-subset selection, Dantzig selector, Simulated Annealing Model Search

**Primary authors:** Dr VAZQUEZ, Alan (University of California at Los Angeles); SCHOEN, Eric (KU Leuven, Belgium); GOOS, Peter (KU Leuven, Universiteit Antwerpen)

**Presenter:** SCHOEN, Eric (KU Leuven, Belgium)

**Session Classification:** INVITED ASQ

**Track Classification:** Other/special session/invited session