EFFECTS OF NOISE IN PERFORMANCE COMPARISONS OF DESIGNS FOR MODEL IDENTIFICATION AND DISCRIMINATION

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This presentation considers the problem of comparison of fractional factorial designs in model identification and model discrimination from a class of models and for a class of designs. We compare performance of designs in model identification and discrimination for a large number of simulated data. The frequency or proportion of correct identification of the model with the mean square error, the average power value and the average p-value for testing the significance of an important parameter are three criterion functions used in our comparison. We also study the effect of noise in our performance comparison of designs. Some results are presented on the performance comparison of four 11-run fractional factorial designs D1, D2, D3 and D4 for a 2^5 factorial experiment in model identification and model discrimination.