

Statistics and Data Science Seminar

Computer Experiment with Qualitative and Quantitative Factors

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Abstract: Computer experiments with qualitative and quantitative factors occur frequently in various applications in science and engineering. Design and analysis of such experiments is not yet completely resolved. To address this issue, we propose a new class of designs and a flexible modeling approach. The proposed designs allow us to accommodate a large number of qualitative factors with economic run sizes. Properties of such designs will be discussed. Several construction methods will be given. The new modeling approach employs a flexible function to capture the correlation among qualitative and quantitative factors. Several examples are provided to demonstrate significant improvement in prediction.

Wednesday, December 3 at 4:00 PM in SEO 636