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Lessons Learned from a Career of Design of Experiments Collaborations

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George Box made many profound and enduring theoretical and practical contributions to statistical design of experiment and response surface methodology and their influence on industrial engineering and quality control applications. His focus on using statistical tools in the right way to solving the right real-world problem has been the inspiration throughout my career. Our statistical training often leads us to focus narrowly on optimality, randomization and quantifying performance. However, the practical aspects of implementation, matching the design to what the experimenter really needs, using available knowledge about the process under study to improve the design, and proper respect for the challenges of collecting data are often under-emphasized and could undermine the success of design of experiment collaborations. In this talk, I share some key lessons learned and practical advice from 100+ data collection collaborations with scientists and engineers across a broad spectrum of applications.

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Special/invited session

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