Graduate Student Colloquium

An Introduction to Optimal Experimental Design

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Abstract: Every statistician has heard of R.A. Fisher. Modern experimental design was born with his 1935 publication, The Design of Experiments. The goal of this talk will be to first introduce design fundamentals, as developed by Fisher, as well as a general model framework, the Gauss-Markov Theorem for finding the Best Linear Unbiased Estimator (BLUE), and properties of this estimator. Then we will move toward discussing what much of current experimental design research involves, that is how to choose an "optimal" design. Finally, we will explore several commonly used criteria which "minimize" the variance-covariance matrix of the BLUE.

Wednesday, April 10 at 5:00 PM in 636 SEO