Graduate Statistics Seminar

A discussion on the performance of the Coordinate-Exchange Algorithm

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Abstract: The use of discrete choice experiments (DCEs) for modeling real marketplace choices, in both fundamental and applied research, has gained much attention recently. To construct proper choice designs, one needs the help of efficient search algorithms, among which the coordinate-exchange algorithm (CEA) has shown itself to work very well under the widely used multinomial logit discrete choice model. However, due to the discrete nature of choice designs, there are no computationally feasible ways to verify the real performance of the resulting designs. In this talk, I'll discuss an approach of evaluating the performance of the CEA. Empirical study was conducted to show that the CEA is indeed highly efficient for deriving homogeneous optimal designs.

Tuesday, February 9 at 4:00 PM in SEO 636