Otto-von-Guericke-Universität Magdeburg
Fakultät für Mathematik

Auf Einladung des Institutes für Mathematische Stochastik spricht

Frau Dr. Rakhi Singh
(TU Dresden)

über das Thema

Choice experiments: A brief overview and recent developments

Ort: Otto-von-Gueriecke-Universität, G18-401
Zeit: 04. Juli 2019, 13:15 Uhr

Zu diesem Vortrag sind alle Interessierten herzlich eingeladen.

Abstract:
Over the past several years, choice experiments have gained popularity due to their demonstrated usefulness in several industrial areas such as manufacturing, services, policy-making, transportation, etc. In a choice experiment, a choice design consisting of several sets with multiple options is shown to respondents. The respondents are then asked to give their preference among the many options for each of the choice sets shown to them. Choice designs are usually studied under the multinomial logit model. In this context, the author-groups Street--Burgess and Huber--Zwerina have adopted different approaches and used seemingly different information matrices to obtain optimal designs. There has also been some confusion regarding the inference parameters expressed as linear functions of the option effects. In the first part of my talk, I will discuss our results which clarify these confusions and will talk about the parameters that are inferred upon under different setups. In the second part of my talk, I will talk a bit about different scenarios under which we have obtained optimal designs. For example, I will talk a bit about blocked choice experiments in a general setup and how they could be useful in practice. Then, finally, considering three-level paired choice designs for estimating all the main effects and two-factor interaction effects under the utility-neutral multinomial logit model, I will talk about a general technique involving generators to reduce the number of choice pairs in a D-optimal design and show a few examples of generators which significantly reduces the number of choice pairs involved.