## Leveraging AI for Survey Research

This presentation scrutinizes the transformative potential of Large Language Models (LLMs) in survey research, focusing on three critical areas: questionnaire design, synthetic data creation, and the role of LLMs as qualitative interviewers. In the domain of questionnaire design, the lecture delves into if and how LLMs can construct contextually accurate and highly effective survey items. However, there are valid concerns about the model's understanding and potential biases, which we will critically evaluate. She also discusses LLMs' ability to fabricate synthetic data, preserving core statistical properties whilst ensuring privacy. Here too, the ethical implications and the potential for misuse of this capability pose challenges that need to be addressed. Lastly, the lecture explores how LLMs, with their human-like conversational ability, can act as qualitative interviewers, allowing in-depth information gathering at scale. Yet, questions about their ability to fully capture the complexity and subtleties of human interaction and response also remain. The underlying theme of this talk is the question on how research in this space should be structured.

**Frauke Kreuter** is a professor in the Joint Program in Survey Methodology (JPSM), Co-director of the Social Data Science Center (SoDa) at the University of Maryland, and chair of Statistics and Data Science at LMU Munich. She is an elected fellow of the American Statistical Association, and received the Warren Mitofsky Innovators Award of the American Association for Public Opinion Research in 2020. In addition to her academic work, Professor Kreuter is the Founder of the International Program for Survey and Data Science (IPSDS), developed in response to the increasing demand from researchers and practitioners for the appropriate methods and right tools to face a changing data environment; Co-Founder of the Coleridge Initiative, whose goal is to accelerate data-driven research and policy around human beings and their interactions for program management, policy development, and scholarly purposes by enabling efficient, effective, and secure access to sensitive data about society and the economy.