

# Andreas Küpfer

## Computational Social Scientist

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I analyze multimodal political communication, including social media, speeches, and advertisements, using a combination of machine learning models and traditional methods to address substantial questions in Political Science and advance methodological research.

## Current Position

2022-present

### Ph.D. Candidate and Research Associate

Technical University of Darmstadt

Supervisor: Prof. Christian Stecker (Technical University of Darmstadt)

Co-Supervisor: Dr. Christian Arnold (University Cardiff)

## Education

2019-2022

### M.Sc. Data Science, University of Mannheim

Supervisor: Prof. Thomas Gschwend and Dr. Denis Cohen

*Thesis: When local context trumps party unity: Using Twitter and NLP to explain geographical heterogeneity in legislators' policy communication*

2015-2019

### B.Sc. Business Information Systems, University of Applied Science Karlsruhe

2017

**ERASMUS Student, B.Sc. Informatics**, Metropolia University of Applied Sciences in Helsinki, Finland

## Publications

Forthcoming

### The Role of Hyperparameters in Machine Learning Models and How to Tune Them

C. Arnold, L. Biedebach, A. Küpfer, M. Neunhoeffner

Political Science Research and Methods (PSRM)

## Under Review

2023

### Non-random Tweet Mortality and Data Access Restrictions: Compromising the Replication of Sensitive Twitter Studies

A. Küpfer

## Working Papers

2023

### How Alignment Helps Make the Most of Multimodal Data

C. Arnold, A. Küpfer

- 2024 **Structuring Quantitative Image Analysis with Metric Depth**  
C. Arnold, A. Küpfer
- 2023 **The Temporal Dimension of Parliamentary Dialogue: When are MPs Seeking and Avoiding Discourse Strategically?**  
E. Koch, A. Küpfer
- 2024 **Gendered patterns of parliamentary behavior: Do men and women differ when asking questions during debates?**  
C. Juen, E. Koch, A. Küpfer, C. Stecker
- 2022 **What we can and cannot learn from responses to legislative speeches. Evidence from the German Bundestag, 1949-2021**  
A. Küpfer, J. Müller, C. Stecker
- 2022 **The housing crisis on social media: Housing markets and the subnational diversification of policy supply**  
D. Cohen, A. Küpfer, T. Allinger

## Research Dissemination

### Conferences

- 2023 **IASGP Annual Conference 2023<sup>P</sup>**, Mannheim, Germany
- 2023 **ECPR Standing Group on Parliaments<sup>P,d,c</sup>**, Vienna, Austria
- 2023 **EPSA<sup>P,d</sup>**, Glasgow, Scotland
- 2023 **COMPTXT<sup>P,c</sup>**, Glasgow, Scotland
- 2022 **DVPW Group Comparative Research on Parliaments<sup>P</sup>**, Bremen, Germany
- 2022 **EPSA<sup>P</sup>**, Prague, Czech Republic
- 2022 **PolMeth Europe<sup>P</sup>**, Hamburg, Germany
- 2021 **PolMeth Europe**, Virtual

p = Presenter, d = Discussant, c = Panel Chair

### Press

- 2023 [Der Frankfurter Wahlkompass VOTO zur OB-Wahl 2023](#), [FAZ](#) (with Thilo Dieng and Christian Stecker)
- 2023 [Wahlrecht ab 16, mehr autofreie Zonen und gebührenfreie Kinderbetreuung? Die Positionen der Kandidierenden zur Oberbürgermeisterwahl in Darmstadt in der Online-Wahlhilfe VOTO](#), [Darmstädter Echo](#) (with Christian Stecker)
- 2023 [Wahlkompass bietet Orientierung im Kandidatenschwungel \(FAZ\)](#), (with Christian Stecker)
- 2023 [Viele Köpfe und ein breites Angebot. Die Positionen der Kandidierenden zur Frankfurter Oberbürgermeisterwahl](#), [FAZ](#) (with Christian Stecker)

### Web Publications

- 2023 [BERT and Explainable AI](#), Method Bites, Blog of the Mannheim Centre for European Research (MZES) Social Science Data Lab
- 2022 [Collection, Management, and Analysis of Twitter Data](#), Method Bites, Blog of the Mannheim Centre for European Research (MZES) Social Science Data Lab

## Software

2022 **triviz**, Triangular visualizations for the significance of pairwise differences from multigroup comparisons (Denis Cohen and *Andreas Küpfer*)

## Teaching

2023 **Quantitative Text Analysis in R**, Postgraduate seminar, Technical University of Darmstadt

2023 **Data Analysis: From Data Crawling to Visualization**, Guest Lecture (180 minutes), National University of Kyiv-Mohyla Academy

2023 **Getting started with Python: A how-to guide for social scientists**, Workshop with two sessions à 90 minutes, MZES Social Science Data Lab (with Ruben Bach)

2022, 2023 **Introduction to Quantitative Methods in R**, Postgraduate seminar, Technical University of Darmstadt

2022 **Collection, Management, and Analysis of Twitter Data: Using the Twitter API for Academic Research and BERT**, Workshop (90 minutes), MZES Social Science Data Lab

2017 **IT Security and Operating Systems**, Undergraduate tutorial, University of Applied Sciences Karlsruhe

2016 **Programming II**, Undergraduate tutorial, University of Applied Sciences Karlsruhe

2016 **Introduction to Business Informatics**, Undergraduate tutorial, University of Applied Sciences Karlsruhe

## Awards

*Athene Award for excellent teaching (TU Darmstadt) (11/2023)*

## Referee

*Political Analysis*

## Community Service

*Member of the decision committee for the German public-private scholarship (Deutschlandstipendium) (since 11/2023) • Data infrastructure representative (since 11/2023)*

## Selected Work Experience (Academia)

03/2021-present **Research Assistant at Social Science Data Lab**, MZES (Dr. Denis Cohen)

10/2020-12/2021 **Research Assistant at Chair of Political Science, Quantitative Methods in the Social Sciences**, University of Mannheim (Prof. Thomas Gschwend)

09/2021-12/2021 **Project Data Science and Big Data at Schools** [Prodabi](#), Paderborn University (Prof. Rolf Biehler)

## Selected Work Experience (Industry)

07/2018-02/2020 **Working Student Data Science/Finance**, SAP SE in Walldorf, Germany  
02/2018-07/2018 **Internship Custom Solution Development**, Capgemini in Stuttgart, Germany