

Dr. Vera Schmitt | Curriculum Vitae

Email: vera.schmitt@tu-berlin.de

Founder and Head of XplaiNLP Group TU Berlin: <https://xplainlp.github.io/>

Personal webpage: <https://veraschmitt.github.io/>

Google Scholar: <https://scholar.google.com/citations?user=pKbJC10AAAAJ&hl=en>

Born in Überlingen am Bodensee on July 03, 1990. Nationality: German



Profile

My research focus lies at the intersection of natural language processing (NLP), eXplainable AI (XAI), human-computer interaction (HCI), to develop Intelligent Decision Support Systems (IDSS) in the domain of machine intelligence for high-stake decision making, particularly in the domain of medical decision support and fact-checking.

Focus Areas: **(1) Machine Learning:** advancing the development and application of NLP and large language models (LLMs) to address societal challenges, tackling social issues such as mis- and disinformation; **(2) XAI:** developing multi-level XAI features concerning *mechanistic interpretability* and *post-hoc* XAI explaining model inner behavior, model uncertainty, and natural language explanations for effective human involvement; **(3) Human-Centered AI and Explainable Decision Support:** designing user-centric, AI-driven decision-making systems with a strong emphasis on efficient role allocation, transparency and explainability, enabling intelligent and trustworthy decision support across diverse high-risk domains.

Professional Experience

- 05/2025 Research visit at Recherche for the Centre National de Recherche Scientifique (CNRS) at Prof. Nicholas Ashers chair
- 07/2024 – 01/2025 START Qualification for managers at TUB with 4 modules concerning group leadership
 - Since 12/2024 Member of the Center for European Research in Trusted AI (CERTAIN)
 - Since 10/2024 Member and Mentor of AI Grid
- Since 09/2024 Granted the right to independently supervise and confer doctoral degrees (*Promotionsrecht*) with the BMBF research group funding (*VeraXtract*) following the successful defense of my PhD
- Since 04/2024 Associated member of AI4Media EU Network
- Since 08/2023 Expert Committee DIN Norm, Bedarf 01-15: Standardisierung von Language Technology und NLP APIs
- 04/2023 Guest researcher at German Research Center for Artificial Intelligence, Speech and Language Technology Lab
- 09/2022-12/2022 Research stay in Israel at the Department of Industrial Engineering at the Tel Aviv University; collaboration with Prof. Joachim Meyer and Prof. Eran Toch
 - Since 04/2022 Founder and head of the XplaiNLP group at Quality and Usability Lab at Technical University Berlin, at the intersection of NLP/LLM applications, XAI and HCI for high-stake decision making
 - Since 06/2021 Member of the Ethics Committee of Faculty IV of Technical University Berlin
 - Since 02/2020 Researcher at the Quality and Usability Lab at Technical University Berlin
 - Since 05/2017 Member of the international ChangemakerXchange network (Robert Bosch Foundation) for startups worldwide
- 07/2015-10/2017 Co-founder and deputy chairwoman of CorrelAid
- 05/2017- 10/2019 Research assistant at Max-Planck Institute for Meteorology in Hamburg (machine learning for weather forecasts), and Hapag-Lloyd GmbH in the machine learning group

Education

- 02/2020 - 05/2024 Technische Universität Berlin: PhD student in the Quality and Usability Lab of Prof. Möller

Topic: *Monetary Valuation of Privacy: Analyzing the Consistency of Valuation Methods and Their Influencing Factors*

Grade: defended with *summa cum laude* (1.0/1.0)

PhD Committee: Prof. Dr.-Ing. Möller, Prof. Dr. Meyer, Prof. Dr.-Ing. Siegert, Prof. Dr. Schiering

02/2022 – 07/2022 Berlin Certificate of Teaching Internationally

10/2016 - 11/2019 M.Sc. Data Science; focus: machine learning; Leuphana University Lüneburg

10/2012 - 06/2016 B.A. in Politics and Public Administration; focus: Survey Science and Statistics; University of Konstanz
Erasmus semester in Prague (08/2014 - 03/2015)

01/2012 – 07/2012 Basic Military Training in Seeth and Mountain Infantry in Füssen

Awards and Honors

09/2024 TUB internal research funding bonus of 10,000 € per year for excellent research achievements in founding and building the XplaiNLP research group

06/2024 Best Innovative Idea Award at International Conference on Quality of Multimedia Experience (QoMEX)

06/2023 Diversity and Societal Impact Award at International Conference on Quality of Multimedia Experience (QoMEX)

09/2022-12/2022 DAAD Scholarship for research stay at the Tel Aviv University

08/2014-03/2015 Scholarship, Erasmus Programme for studying abroad

Research Group

Current PhD Students in my group:

2023-present **Charlott Jakob:** political leaning detection, RAGs, and trustworthy AI

2023-present **Premtim Sahitaj:** knowledge-based reasoning, evidence retrieval with external knowledge bases

2023-present **Luis-Felipe Villa-Arenas:** model faithfulness, faithful information retrieval, faithful XAI generation

2023-present **Ibrahim Baroud:** anonymization of text-based medical records, medical decision-support

2024-present **Qianli Wang:** *post-hoc* XAI, natural language explanation generation, LLM-as-a-Judge, quantization

2025-present **Arthur Hilbert:** multi-level XAI, faithful XAI generation with logic-based approaches and causal reasoning

2025-present **Max Upravitelev:** narrative extraction, RAGs, faithful information retrieval, rule-based approaches

2025-present **Joao de Mata:** HCI, dynamic role allocation of human-AI decision making for high-stake domains

2025-present **Shengyun Si:** improving model architectures for MLLMs for high-stake domains

Moreover, the PhDs are supported by 7 student researchers (3 student researchers are currently in the employment process)

Current postdoctoral researchers in my group:

2025-present **Dr. Veronika Solopova:** leading NLP/MLLM team for mis-and- disinformation

2024-present **Dr. Jing Yang:** leading XAI team for mis-and- disinformation

2025-present **Dr. Nils Feldhus:** leading XAI team for medical decision-support (will defend in April)

2024-present **Dr. Lisa Raithel:** leading NLP/MLLM team for medical decision-support

Founder and head of the XplaiNLP research group:

2023-present **Dr. Vera Schmitt** (since I have defended my PhD and acquired the additional BMBF research group funding “VeraXtract”, I can independently supervise PhD students in my group)

Scientific and other Collaborations (Selection)

The XplaiNLP group actively collaborates with all partners involved in the various ongoing research projects, fostering strong research ties with both academic institutions and industry leaders. Beyond these projects, we maintain research collaborations with several international researchers to further strengthening our network and interdisciplinary impact:

Germany	Prof. Sebastian Möller (TUB, QUL), Prof. Dorothea Kolossa (TUB, MTEC), Prof. Wojciech Samek (TUB/BIFOLD/Fraunhofer HHI), Prof. Maija Poikela (BIH Charité). Prof. Klaus Beier (IfSS Charité), Prof. Marc Dewey (Charité), Prof. Leif Erik Sander (Charité), Dr. Jonas Fegert (FZI, KIT), Dr. Tim Polzehl (DFKI, SLT), Dr. Kevin Baum (DFKI, Responsible AI and Machine Ethics Group), Dr. Simon Ostermann (DFKI, Efficient and explainable NLP models Group), Prof. Ingo Siegert (OVGU), Dr. Patrick Aichroth (Fraunhofer IDMT)
Israel	Prof. Joachim Meyer (Tel Aviv University - collaboration on intelligent decision support systems) Prof. Eran Toch (Tel Aviv University - collaboration on usable privacy topics) Prof. Yoella Bereby-Meyer (Ben-Gurion University of the Negev - collaboration on social decision making)
Japan	Prof. Junichi Yamagishi (National Institute of Informatics Tokyo, Yamagishi Lab, RAGs, fact-checking, LLMs), the PhD Premtim Sahitaj just went for a research stay for four months to his lab
Denmark	Prof. Isabelle Augenstein (head of Copenhagen Natural Language Understanding research group starting a collaboration on NLP and mis-and disinformation detection (research visit planned in 09/2025 and research exchange between PhDs in both groups)
USA	Prof. Nickel (Bucknell University in Lewisburg) - collaboration via the noFake project
Spain	Prof. Paolo Rosso (Universitat Politècnica de València - collaboration on NLP/LLMs and fact-checking) Prof. Antonio García Cabot (INTELIA Lab, University of Alcalá, UAH, Madrid)
Finland	Prof. Tom Bäckström (AALTO University - collaboration on privacy in speech)
France	Prof. Nicholas Asher – Centre National de Recherche Scientifique MELODI group
UK	Prof. Andreas Vlachos (Cambridge University) starting a collaboration on NLP and mis-and disinformation detection Prof. James Nicholson (Northumbria University - collaboration on privacy engineering)
Brazil	Prof. Dante Barone (Dante Barone Universidade Federal do Rio Grande do Sul - collaboration on NLP)

Media dpa, DW, rbb

Industry DeepNews, Ubermetrics Technologies, delphai, Transfermedia, Crowdee, Siemens AG, Bosch, Datev, acatech, SoftwareCampus

Scientific Startup Graetchen.AI
Advisor

Scientific Community Service

Reviewer for:

Conferences:

- Annual Meeting of the Association for Computational Linguistics (ACL)
- ACM Conference on Human Factors in Computing Systems (CHI)
- ACM International Conference on Multimedia Retrieval (ICMR)
- ACM Forum for Information Retrieval Evaluation (FIRE)
- xAI World Conference
- AAAI Conference on Human Computation and Crowdsourcing (HCOMP)
- International Conference on Speech and Computer (SPECOM)
- International Conference on Electronics, Communications and Networks (CECNet)
- Mensch und Computer (MuC)

Journals:

- ACM International Journal of Human - Computer Studies
- IEEE Journal of Transactions on Computational Social Systems
- Springer Nature, Machine Learning Track
- Journal of Cognitive Systems Research

- Journal of Computers & Security
- Journal of Computers and Electrical Engineering
- Frontiers of Psychology Journal

PC/Editorial Board Member:

- ACL Area Chair (AC Industry Track 2025)
- ACM International Workshop on Multimedia AI against Disinformation (MAD'25) at ICMR conference
- Journal of Advance in Information Technology and Computer Science
- Mensch und Computer (MuC)

Teaching

Overall, I supervised **21 theses projects** (16 master's theses, 5 bachelor's theses, see teaching statement)

- WS 2025/2026 At present, I am preparing my own lecture "Applications of Natural Language Processing" for master students, scheduled for the upcoming winter semester
- SS 2025 Usability Engineering Exercise/ Advanced Study Projects (9 ECTS) projects
- SS 2024 Advanced Study Projects (9 ECTS) project with M.A. students LLMs for information extraction project
- WS 2023/2024 Advanced Study Projects (9 ECTS) project with M.A. students LLMs for fact checking
- SS 2023 Advanced Study Projects (9 ECTS) 2 projects on Fusion Models and GANs for synthetic data generation and LLM-based Sustainable Development Goal (SDG) detection
- WS 2022/2023 Usable Privacy Seminar for M.A. students (3 ECTS), solely conducted by me
- SS 2022 Advanced Study Projects (9 ECTS) 2 projects with B.A. students on HCI and LLM-based Sustainable Development Goal (SDG) detection challenge
Projekt Medienerstellung (6 ECTS) 2 projects on building an intelligent hydroponic system, and location privacy engineering
Usability Engineering Exercise
- WS 2021/2022 Usable Privacy Seminar for M.A. students (3 ECTS), solely conducted by me
Advanced Statistics Seminar for M.A. students (3 ECTS), conducted together with another PostDoc
- SS 2021 Projekt Medienerstellung (6 ECTS) 2 projects on HCI and building and intelligent hydroponic system
- WS 2020/2021 Usable Privacy Seminar for M.A. students (3 ECTS), solely conducted by me
Advanced Statistics Seminar for M.A. students (3 ECTS), conducted together with another PostDoc
- SS2020 Advanced Study Projects (9 ECTS) project with M.A. students usable privacy engineering
Projekt Medienerstellung (6 ECTS) project with B.A. students on HCI

Media Interviews (Selected Highlights)

About my research group:

- 02/2025 Interview with **TU Berlin**:
Press release: "Resilient gegen Desinformation – mit KI im Kampf für gesellschaftlichen Zusammenhalt"
<https://www.tu.berlin/nachrichtendetails/resilient-gegen-desinformation-mit-ki-im-kampf-fuer-gesellschaftlichen-zusammenhalt>
Interview: „Wir wollen die gesellschaftliche Widerstandsfähigkeit gegenüber Desinformation stärken.“
<https://www.tu.berlin/news/interviews/forschungsgruppe-xplainlp>
- 10/2024 **Interview**: with **AI Berlin** about my research group: <https://ai-berlin.com/blog/article/dr-vera-schmitt-head-of-xplainlp-group-at-tu-berlin>

Mis-and Disinformation:

- 02/2025 **Interview BBC News Russia**: "Record results for the far right in the German elections. Why are they so popular? | BBC report" access documentary: <https://www.youtube.com/watch?v=mwHMOU09QOI>, and article: <https://www.bbc.com/russian/articles/c8j0y782mlgo>

- 02/2025 **Interview DW:** "Fact check: AI influencers targeting German elections" access interview: <https://www.dw.com/en/fact-check-ai-influencers-targeting-german-elections/video-71514325>
- 02/2025 **Interview Tagesschau:** "Rechts, weiblich, fake", access interview: <https://www.tagesschau.de/faktenfinder/kontext/rechte-ki-influencer-100.html>
- 02/2025 **Interview EFE/SwissInfo CH:** "Las elecciones alemanas, asediadas por la desinformación y la injerencias rusa y de Musk" access interview: <https://www.swissinfo.ch/spa/las-elecciones-alemanas%2C-asediadas-por-la-desinformaci%C3%B3n-y-la-injerencias-rusa-y-de-musk/88890581>
- 02/2025 **Interview Télévision Française 1 (TF1):** "VÉRIF' - Élections en Allemagne : comment l'extrême droite utilise l'IA pour désinformer", access interview: <https://www.tf1info.fr/international/verif-elections-en-allemande-2025-comment-l-afd-utilise-l-intelligence-artificielle-ia-a-des-fins-de-desinformation-2351527.html>
- 06/2024 **WDR radio interview:** „Deepfakes erkennen mit KI“, access interview: <https://www1.wdr.de/mediathek/audio/wdr5/wdr5-toene-texte-bilder-interviews/audio-deepfakes-erkennen-mit-ki-100.html>
- 06/2024 **Interview DFKI:** “Deepfakes im Visier: KI als Waffe gegen digitale Manipulation”: <https://www-live.dfki.de/web/news/mit-ki-gegen-deepfakes>
- 05/2024 **RadioEins rbb:** „Deepfakes - Our New Reality? Access interview: <https://www.radioeins.de/programm/sendungen/sondersendung/re-publica-2024/beitraege/deepfakes---our-new-reality--.html#top>

Other Topics:

- 01/2025 **Press Release TU Berlin:** DeepSeek vs OpenAI - Expert Interview: <https://www.tu.berlin/news/pressemitteilung/tu-berlin-expertinnen-zum-juengsten-erfolg-von-deepseek>

The full list of interviews can be found here: <https://veraschmitt.github.io/talks/>

Invited Talks, Keynotes, and Panels (Selected Highlights)

- 2025 **Panel Discussion: Aktionswoche ARD zur Bundestageswahl** - live at rbb24 and ARD: „Fakten statt Fiktion – Gemeinsam gegen Desinformation“
Panel members: Alexandra Geese (EU Parliament), Dr. Vera Schmitt (Head of XplaiNLP Group), Jörg Müller (Head of the Office for the Protection of the Constitution Brandenburg), Patrick Stegemann (journalist and CEO of "Undone") - live stream in **ARD**
Link: <https://shorturl.at/lrxUR>
- 2024 **Panel Discussion:** “How does AI help with fact-checking”
Panel members: Prof. Sebastian Möller (TU Berlin), Prof. Sabine Ammon (TU Berlin), Prof. Dorothea Kolossa (TU Berlin), Dr. Vera Schmitt (Head of XplaiNLP Group), moderated by Wolfgang Richter
Link: <https://www.tu.berlin/nachrichtendetails/einladung-wie-hilft-ki-beim-faktenchecken>
- 2024 **Invited talk: Falling Walls Science Summit**
Title: “Presentation of news-polygraph project for multimodal mis- and disinformation detection”
- 2024 **Invited talk: re:publica**
Title: “Deepfakes - Our New Reality?”
- 2024 **Invited keynote: Innerbehördliche Kooperation 2024 – IBK 24 Meißen**
Title: Deepfakes – Unsere neue Realität?
- 2024 **Invited talk:** dpa (with 130 journalists from all media outlets in Germany)
Title: “KI Wegweiser” what can we do with LLMs for fact checking?
- 2024 **Invited talk:** SoftwareCampus
Title: “How to regulate AI?” introducing the AI Act, DSA and DA for LLM applications
- 2024 **Invited talk:** Digital Technologies and Responsibility Euregio-Workshop at the Interface of Technology, Academia and Public
Title: “Do explanations make a difference?”

- 2023 **Invited keynote:** 3th **Symposium** on Security and Privacy in Speech Communication
Title: “Multimodal Fake News Detection and the AI Act”
- 2023 **Panel discussion:** “AI-Regulation and Data-Protection: Perspectives from the World” SPSC Symposium
Panel members: Prof. Jennifer Williams, Prof. Sneha Das, Prof. Tom Bäckström, and Vera Schmitt, moderated by Prof. Ingo Siegert
- 2023 **Invited talk:** Expert Workshop on Artificial Intelligence and Human Rights - Federal Foreign Office - incubator session prepared and hosted with the Bertelsmann Foundation together
Title: “Fact Matters! The Role of AI in Combating Digital Disinformation”
- 2023 **Panel discussion:** Das Katz- und Mausspiel der Desinformation
Panel members: Dr. Eva Flecken (MABB), Jana Heigl (BR Faktenfuchs), Georg Heil (ARD-Politikmagazins “Kontraste”), Stefan Voß (dpa)
Link: <https://events.rbb-online.de/b/?p=newspolygraph&host=events.rbb-online.de>
- 2022 **Invited talk:** Tel Aviv University
Title: “Usable Security and Privacy”
- 2022 **Invited talk:** Usable Security and Privacy Day 2022
Title: “What is Your Privacy Worth?”
- 2021 **Panel discussion:** Usable Security and Privacy Day 2021
Panel members: Prof. Ahmad-Reza Sadeghi (TU Darmstadt), Prof. Simone Fischer-Hübner (Karlstad University), Prof. Joachim Meyer (Tel Aviv University), Dr. Aljoscha Burchardt (DFKI), CTO Philipp Berger (neXenio), moderated by Vera Schmitt and Prof. Sebastian Möller
- 2017 **Panel discussion:** Bayreuther Dialoge “Big Data – Chance oder Risiko”
Panel members: Konstantin von Notz (Grüne), Nikolaus Blome (BILD-Zeitung); Vera Schmitt (damals co-Founder CorrelAid), Denny Vorbrücken (Bund Deutscher Kriminalbeamter)

The full list of keynotes and panel discussions can be found here: <https://veraschmitt.github.io/talks/>