

Luca-Maxim Meinhardt

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Summary

I am a Human-Computer Interaction researcher with an interdisciplinary background in the design and marketing industry. My work draws on both **qualitative** and **quantitative** research methods, ranging from interviews and workshops to prototyping and **statistical analysis** of (user studies) data to optimize and evaluate user-centered interfaces. I publish these works at top-tier conferences and journals such as ACM CHI and ACM IMWUT.

Having worked in multidisciplinary teams across academia and industry, I am skilled at **bridging design, research, and strategy**. Before starting my PhD, I completed my Master's thesis at Carl Zeiss, where I applied research in an industrial SCRUM environment, collaborating with algorithmic and patent teams to translate insights into actionable product decisions.

Skills (Selection)

Qualitative Research Methods: Participatory Design, Design Thinking, Workshops, Interviews, Thematic Analysis

Quantitative Research Methods: Statistical Analysis, Bayesian Optimization, Linear Mixed Models, Bayesian Statistics

Design: UI/UX Prototyping, Image and Video Editing, Editorial/Motion/Web Design, 3D Modeling

Workflow: Agile/SCRUM, Cross-functional Collaboration, Academic Writing, Grant Writing

Programming: Python, R, Swift, JavaScript, PHP, C, C++

Working Experience

ULM UNIVERSITY - Chair of Human-Computer Interaction

Ulm, Germany

Research Associate

Feb 2022 – Present

- Lead research in HCI using *qualitative* (interviews, workshops, thematic analysis) and *quantitative* (statistical analysis, Bayesian optimization, gaze-analysis) methods on software and hardware interfaces
- Planned and directed 30+ user research studies with up to 250 participants, across VR simulations, accessibility, and social media applications
- Collaborated with international research scholars (e.g., USA, South Korea, Switzerland) on cross-lab projects
- Supervised 20+ undergraduate and graduate students ranging from conception, data analysis, and publication
- Taught: *Recent Trends in Media Informatics* (Winter '22/23), *Fundamentals of Interactive Systems* (Winter '23), and *Human-Computer Interaction* (Summer '24/25)

CARL ZEISS AG - Corporate Research and Technology

Oberkochen, Germany

Master's Thesis Candidate

Apr 2021 – Nov 2021

- Designed and prototyped an iOS application using Swift and OpenCV for self-diagnosing corneal astigmatism; contributed to a pending international patent ([WO2024110403A1](#)).
- Integrated user-guided workflows and computer vision to enable intuitive mobile diagnostics.
- Collaborated with cross-functional teams (algorithms, patents, development) in Agile/SCRUM workflow
- Delivered research-driven design recommendations to stakeholders

AUDI AG - Marketing and Brand Experience

Ingolstadt, Germany

Marketing and Project Management Intern

Nov 2018 – Apr 2019

- Managed 3 classic/digital/social media campaigns
- Organized Audi's social media brand activation at the Berlinale Film Festival (Berlin) and Online Marketing Rockstars (Hamburg)
- Collaborated with event teams and external creative agencies to align campaigns with national brand strategy

KOLLE REBBE (Accenture Interactive)

Hamburg, Germany

Digital Art Intern

Mar 2018 – Aug 2018

- Designed and conceptualized social media campaigns for global brands (AUDI, Rauch), creating digital content
- Collaborated with cross-functional teams (copywriters, strategists) to align campaigns with client goals, streamlining workflows for 50+ design works.

Education

Ulm University

PhD Candidate, [Human-Computer Interaction](#)

All PhD requirements completed; dissertation in progress

Dissertation Working Title: Special Information Needs in Emerging Automated Mobility

Research Areas: Urban Air Mobility, Accessibility in Transportation, Digital Well-being

Ulm, Germany

Feb 2022 – Jan 2026 (*expected*)

Santa Clara University

Visiting Researcher at [Human-Computer Interaction Lab](#)

Research Area: Digital Well-being

Santa Clara, CA, USA

Jan 2025 – Feb 2025

University of Siegen

M.Sc. Human-Computer Interaction

Master's Thesis at CARL ZEISS AG - Corporate Research and Technology

Published parts of the thesis at ACM CHI '23: [10.1145/3544549.3585799](#)

Siegen, Germany

Oct 2019 – Dec 2021

Ostfalia University of Applied Sciences

B.A. Media Design

Salzgitter, Germany

Sep 2015 – Nov 2018

Publications and Patents (Selection)

L.-M. Meinhardt, S. Demharter, M. Rietzler, M. Colley, T. Eßmeyer, E. Rukzio (2025). *Mind Games! Exploring the Impact of Dark Patterns in Mixed Reality Scenarios*. PACMHCI '25. [10.1145/3743709](#). Acceptance rate: 27.2%

L.-M. Meinhardt, L. Wilke, M. Elhaidary, J. von Abel, P. Fink, M. Rietzler, M. Colley, E. Rukzio (2025). *Light My Way. Developing and Exploring a Multimodal Interface to Assist People With Visual Impairments to Exit Highly Automated Vehicles*. Proceedings of the ACM CHI '25. [10.1145/3706598.3713454](#). Acceptance rate: 24.9%

L.-M. Meinhardt, M. Elhaidary, M. Colley, M. Rietzler, JO Rixen, A. Purohit, E. Rukzio (2025). *Scrolling in the Deep: Analysing Contextual Influences on Intervention Effectiveness during Infinite Scrolling on Social Media*. Proceedings of the ACM CHI '25. [10.1145/3706598.3713187](#). Acceptance rate: 24.9%

L.-M. Meinhardt, C. Schramm, P. Jansen, M. Colley, E. Rukzio (2025). *Fly Away: Evaluating the Impact of Motion Fidelity on Optimized User Interface Design via Bayesian Optimization in Automated Urban Air Mobility Simulations*. Proceedings of the ACM CHI '25. [10.1145/3706598.3713288](#). Acceptance rate: 24.9%

L.-M. Meinhardt, M. Colley, M. Tahmid, M. Rädler, E. Rukzio (2024). *Wind Of Change: Investigating Information Visualizations for Passengers and Residents' Perception of Automated Urban Air Mobility*. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 2024. [10.1145/3699753](#). Acceptance rate: 20-25%

L.-M. Meinhardt, M. Rück, J. Zähnle, M. Elhaidary, M. Colley, M. Rietzler, E. Rukzio (2024). *Hey, What's Going On? Conveying Traffic Information to People with Visual Impairments in Highly Automated Vehicles: Introducing On-Board*. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 2024. [10.1145/3659618](#). Acceptance rate: 20-25%

D. Dobbelsstein, L. Stoppe, **L.-M. Meinhardt**, M. Wald, A. Leube (2024). *Computer-Implemented Method and Devices for Determining at Least One Astigmatism Parameter of at Least One Eye of a Person*. Pending WO Patent. [2024110403A1](#)

Other

Secured Funding (Selection)

Graduate & Professional Training Center Ulm (2024)

Context- and Content-Specific Interventions for Infinite Scrolling on Social Media Platforms. Principal Investigator

Amount: €10,000

DFG - German Research Foundation (2023)

Non-Visual Interfaces to Enable the Accessibility of Highly Automated Vehicles for People with Vision Impairments.

Co-applicant (PI: Prof. Enrico Rukzio). Project number: [536409562](#)

Amount: €280,901