Luca-Maxim Meinhardt

Ulm, Germany • luca-maxim.meinhardt@live.com • Google Scholar • LinkedIn • GitHub • Website

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 to optimize and evaluate user-centered interfaces. 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

Programming: Python, R, Swift, JavaScript, PHP, C, C++
Qualitative Research Methods: Participatory Design, Design Thinking, Workshops, Interviews, Thematic Analysis
Quantitative Research Methods: Statistical Analysis, Bayesian Optimization, Linear Mixed Models
Design: Image and Video Editing, Editorial/Motion/Web Design, 3D Modeling

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 to align with ophthalmology standards.
- 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 — Ulm, Germany
PhD Candidate, Human-Computer Interaction — Feb 2022 – Jan 2026 *(expected)*
All PhD requirements completed; dissertation in progress
Dissertation Working Title: Special Information Needs in Emerging Automated Mobility
Research Area: Urban Air Mobility, Accessibility in Transportation, Digital Well-being

Santa Clara University — Santa Clara, CA, USA
Visiting Researcher at Human-Computer Interaction Lab — Jan 2025 – Feb 2025
Research Area: Digital Well-being

University of Siegen — Siegen, Germany
M.Sc. Human-Computer Interaction — Oct 2019 – Dec 2021
Master's Thesis at CARL ZEISS AG - Corporate Research and Technology
Published parts of the thesis at ACM CHI '23: 10.1145/3544549.3585799

Ostfalia University of Applied Sciences — Salzgitter, Germany
B.A. Media Design — Sep 2015 – Nov 2018

Publications and Patents (Selection)

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. Dobbelstein, 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