# Mark Colley

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## RESEARCH INTERESTS

My multidisciplinary research in Human-Computer Interaction (HCI), Accessibility, and Computational Methods is dedicated to tackling complex challenges and seizing opportunities within advanced mobility technologies. It involves designing, implementing, and testing novel simulators to study futuristic mobility scenarios. My work aims to address issues such as undertrust in automated vehicles and to enhance accessibility in urban (air) mobility, thereby supporting societal and industrial growth. A significant portion of my research focuses on evaluating innovative interaction paradigms between automated vehicles and vulnerable road users, utilizing empirical evidence alongside simulation-based approaches to analyze their broad-scale impacts.

## EDUCATION

**Ulm University**, Ulm, Germany                                                          04/2019 — 26.04.2024
Doctor of Science (PhD) in Human–Computer Interaction
Thesis Title: *Calibrating Trust in Automated Vehicles - Theoretical, Design, and Empirical Insights into Effects of Visualizations on Trust*
Advisor: Prof. Dr. Enrico Rukzio
Committee: Prof. Dr. Stephen Brewster (University of Glasgow, UK), Prof. Dr. Wendy Ju (Cornell Tech, NYC, USA)

**Cornell Tech**, New York, USA                                  01/2023 — 04/2023 & 07/2023 — 08/2023
Visiting Research Scholar with Prof. Dr. Wendy Ju
*Note:* supported by the German Academic Exchange Service (DAAD)

**Ulm University**, Ulm, Germany                                                          10/2015 — 11/2018
Master of Science in Computer Science                                       Overall Grade: 1.1 - A-equivalent
Thesis Title: *Identification, Investigation and Classification of Use Cases for Cooperation in Highly Autonomous Driving and the Applicability thereof*                                              Grade: 1.0 - A-equivalent

**DHBW Ravensburg, Campus Friedrichshafen**, Friedrichshafen, Germany                     09/2012 — 10/2015
Bachelor of Engineering: Information Technology
Note: cooperative degree as an employee of Airbus Defence and Space GmbH

## JOB EXPERIENCE

**University College London**                                                    London, United Kingdom
*Lecturer/Assistant Professor*                                                           10/2024 — present

**Ulm University**                                                                          Ulm, Germany
*Research Associate*                                                                     04/2019 — 09/2024
I significantly contributed to research and teaching and played a key role in securing and implementing three externally funded projects—INTUITIVER, SituWare, and SEMULIN. Furthermore, I successfully championed novel topics related to accessibility and computational methods into the department's research scope. My work incorporates numerous research approaches such as experiments, interviews, focus groups, literature reviews, observation, usability testing, and dataset creation. It has led to over **30 peer-reviewed first-author full papers**. Since May 2024, I have been working as a postdoctoral researcher.

**Airbus Defence and Space GmbH**                                                           Ulm, Germany
*Software Engineer*                                                                      09/2012 — 03/2019
I developed realistic simulations for aviation use cases, ensuring they closely mirror real-world conditions. My work included thorough testing to guarantee software reliability and performance, coupled with a comprehensive analysis of project requirements to create efficient and client-focused solutions. Additionally, I deployed and integrated these solutions, ensuring a smooth transition and optimal functionality within a safety-critical system that has existed and is being enhanced for >20 years. In 2014, I spent **3 months at Airbus Group in Newport, Wales**, contributing to system engineering tasks.

**Ulm University**                                                                          Ulm, Germany
*Student Research Assistant*                                                             01/2019 — 03/2019
Led comprehensive literature reviews and significantly contributed to developing both a theoretical and an empirical publication on human-vehicle cooperation. My role involved critically analyzing existing works, synthesizing key findings, and collaboratively shaping the direction of the publication. Additionally, I actively participated in internal review processes.

## MEMBERSHIPS, ACADEMIC AND INDUSTRIAL SUPPORT

- McKinsey Capstone Program
- Recipient of the Deutscher Akademischer Austauschdienst (DAAD, German Academic Exchange Service) research stipend 2022 for my research visit at Cornell Tech
- Startup your career support (10.000€) by Ulm University
- Google PaliGemma Academic Program (5.000$)
- Hardware support by Leia Inc. and NextMind (acquired by Snap)
- Heidelberg Laureate Forum Foundation alumnus, member of AlumNode and HLFF Inspiring Minds, mentor: Gabriele Kotsis
- Co-Founder of Zefwih since 01/2022, supported by the German Federal Ministry of Transport and Digital Infrastructure

## SERVICE AND VOLUNTEERING ACTIVITIES

- Reviewing of Project Proposals:
  - Linz Institute of Technology (LIT) Seed Funding Program, JKU, Austria, 2024
  - NWO - Open Competition Domain Science-M, 2024
- Associate Chair / Program Committee Member:
  - Associate Editor for **IMWUT** and **Behaviour & Information Technology**
  - Full Paper - **CHI '24'25**, **CSCW '24**, AutoUI '21-'24, ETRA '24, MobileHCI '23'24, MuC '22'23'24, CUI '24
  - Member of the **Best Paper Committee** for **CHI '24**
  - Late-Breaking Works (LBW) - CHI '22'23'24, TEI '23'24, CHI Play '24
- **Organizing Committee**: AutoUI 2023 (Workshop Chair), AutoUI 2024 (Demo Chair), MuC 2025 Workshop & Tutorial Chair
- Peer Reviewing: **Over 400 peer-reviews completed** so far for **CHI**, **TVCG**, MobileHCI, DIS, TEI, IUI, ISMAR, **TRF**, ETRA, AutoUI, CHI Play, ICMI, EICS, VRST, IEEE VR, **CSCW**, IJHCI, IMWUT, ESWA, **ToCHI**; Reviewer for project ERROR
- Student Volunteer: UbiComp 2022
- Participation in **ISO standardization process** regarding driving simulators
- **Main organizer** of the Post-CHI Summer School On Automotive User Interfaces and Future Mobility
- Co-Organizer of the German Pre-CHI 2022 hosted in Ulm, Germany with more than 70 participants
- **Local council** (2019 — 2024) in 89155 Erbach-Donaurieden, Germany

## TEACHING - all Ulm University

**Research Project in Human–Computer Interaction**
*Course Organizer:* Co-organization of the interdisciplinary project, emphasizing user-centered design and design thinking, integrated with a year-long, research-driven group project that culminated in several publications.      Fall 2019 — Fall 2023

**Research Trends in Media Informatics**
*Course Organizer:* Co-organization of the course, mentoring PhD students on course structure and content, and personally delivering in-depth, one-on-one instruction to over 15 students on conducting literature surveys using the PRISMA method, complemented by active involvement in student assessment and grading processes.                Fall 2019 — Fall 2023

**Automotive user interfaces and interactive vehicle applications**
*Course Organizer and Lecturer:* Actively participated in the co-development of comprehensive course materials, aligning them with industry standards and academic requirements. Delivered an in-depth lecture focused on external communication of automated vehicles, a key component crucial for students' success in the final assessment. Contributed to the evaluation process by assisting in grading, ensuring a fair and thorough assessment of student performance.                Fall 2022

## THESIS SUPERVISION (Main Supervisor, Selection, Total=50)

**Bachelor theses**
- Simon Kopp (Ulm University; 2024)
- Jonathan Westhauser (Ulm University; 2023)
- Alexander Fassbender (Ulm University; 2022)
- Julian Britten (Ulm University; 2022)
- Elvedin Bajrovic (Ulm University; 2021)
- Tim Fabian (Ulm University; 2021)
- Max Rädler (Ulm University; 2021)
- Svenja Krauß (Ulm University; 2020)

- Jan Henry Belz (Ulm University; 2020; **now PhD student at Ulm University in collab. with Porsche AG**)
- Stefanos Mytilineos (Ulm University; 2020)
- Christian Bräuner (Ulm University; 2019)

**Master theses**
- Svenja Krauß (Ulm University; 2023)
- Max Rädler (Ulm University; 2023; **now PhD student at Ulm University**)
- Bastian Wankmüller (Ulm University; 2022)
- Cristina Evangelista (Ulm University and Cerence GmbH; 2022)
- Albin Zeqiri (Ulm University; 2022; **now PhD student at Ulm University**)
- Annika Stampf (Ulm University and Mercedes Benz AG; 2021; **now PhD student at Ulm University**)
- Pascal Jansen (Ulm University; 2021; **now PhD student at Ulm University**)
- Leon Dönch (University of Munich; 2020); co-supervised with Dr. Kai Holländer
- Gülsemin Dogru (Ulm University and Bosch GmbH; 2019)

## INVITED TALKS AND SEMINARS (Selection)

**Talks**
- University of Sydney Design Lab (09.08.2024): "Shaping the Future of Mobility"; in-person
- UC Calgary iLab (01.08.2023): "Automotive UI: The Intersection of Accessibility, Computational Methods, and Design"
- KIT at Human-Centered Systems Lab (01.12.2022): "Inclusive Interaction with Future Mobility"

**Seminars**
- Heidelberg Laureate Forum (23.09 - 30.09.2023)
- Dagstuhl Seminar - Radical Innovation and Design for Connected and Automated Vehicles (May 29 – Jun 03, 2022)

## AWARDS

**Outstanding Reviewer Recognition: AutoUI '21, CHI '21, CHI '22, 4xCHI '24, IMWUT '23, MobileHCI '23'24 (3x), UIST '23, CHI Play '24 (3x)**
I have been honored with sixteen Outstanding Reviewer Awards and was named **Distinguished Reviewer** for MobileHCI'23, showing my commitment to excellence in academic review processes. These accolades reflect my deep understanding and critical analysis skills, contributing significantly to the advancement of scholarly discourse.

**Honorable Mention Award at CHI'24 - DOI: 10.1145/3613904.3642341**
A full paper that addressed the challenge in automotive user interface design where testing transitions from lab-based driving simulators to on-road studies to increase ecological validity faces difficulties in replicating studies received an Honorable Mention Award. A platform-portable infrastructure named *Portobello* was developed to facilitate running identical studies in both in-lab and on-road environments. A proof-of-concept was demonstrated by integrating Portobello with the on-road simulator XR-OOM with 32 participants in both settings.

**Honorable Mention Award at MobileHCI'23 - DOI: 10.1145/3604275**
I received recognition for a full paper that delved into the impact of Infinite Scrolling on social media usage, particularly focusing on how it contributes to habitual and regretful use. Our study (N=46) not only defined and examined the 'loop' phenomenon that traps users in extended sessions but also emphasized the importance of considering the user's context in designing interventions, revealing that breaks in social media usage are often influenced by factors outside the app itself.

**Best Video Award at AutoUI'23 - DOI: 10.1145/3581961.3609854**
I was honored to receive the Best Video Award, chosen by popular vote, for a video presentation in which we explored the nuanced distinctions between autonomous, automated, and highly automated vehicles. The video aimed to stimulate a balanced discussion on the potential impacts—positive, negative, and ambiguous—of truly autonomous vehicles that can act independently, possibly even against the wishes of their owners.

**Honorable Mention Award at MobileHCI'22 - DOI: 10.1145/3546712**
I was honored to receive an Honorable Mention Award for a full paper that developed a taxonomy of augmented reality visualizations for connected automated and manual driving, aiming to enhance trust in such systems. Our work, which included an evaluative driving simulator study, focused on how augmented reality can help drivers and passengers understand and trust the information provided by infrastructure-mounted sensors and onboard systems.

**Honorable Mention Award at CHI'20 - DOI: 10.1145/3313831.3376472**

I was thrilled to receive an Honorable Mention Award for a full paper that presented an inclusive user-centered design for vehicle-pedestrian communication, aimed at enhancing the safety and experience of both vision-impaired and sighted pedestrians. Workshops with vision-impaired individuals and a virtual reality study revealed that communication from all relevant vehicles and detailed messaging significantly improves trust and understanding and reduces cognitive load for pedestrians.

## SKILLS

- Coding: Programming in **R** (data analysis, visualization, web-scraping), Python (application of neural networks), Java (professionally at Airbus), and C# (especially with **Unity**)
- Research: **Quantitative Analysis** using R; experience with parametric and non-parametric data; linear regression and hierarchical models
- Research: **Qualitative Analysis** according to Saldaña
- Proficient in open science practices, encompassing transparency, reproducibility, and accessibility in research; experienced in sharing data (e.g., here) via open access platforms, utilizing open-source tools, contributing to community projects, and advocating for ethical research aligned with FAIR principles.
- Languages: German (native), English (proficient), French, Spanish (Intermediate), Latin
- Former Lifeguard with the Deutsche Lebens-Rettungs-Gesellschaft e.V. (DLRG; German Life Saving Association)

## MAJOR PUBLICATIONS (CHI, IMWUT)

ACM CHI/IMWUT are widely recognized as the premier venues for publishing research in the field of HCI. They are highly competitive, with acceptance rates typically ranging between 20-25%.

**CHI**

1. **M. Colley**, O. Rajabi, and E. Rukzio, Investigating the Effects of External Communication and Platoon Behavior on Manual Drivers at Highway Access
*In Proc. of CHI 2024*, ACM, doi: 10.1145/3613904.3642365
2. **M. Colley**, B. Wanner, M. Rädler, M. Rötzer, J. Frommel, T. Hirzle, P. Jansen, and E. Rukzio, Effects of a Gaze-Based 2D Platform Game on User Enjoyment, Perceived Competence, and Digital Eye Strain
*In Proc. of CHI 2024*, ACM, doi: 10.1145/3613904.3641909
3. D. Dey, T. Senan, B. Hengeveld, **M. Colley**, A. Habibovic, and W. Ju, Multi-Modal eHMIs: The Relative Impact of Light and Sound in AV-Pedestrian Interaction
*In Proc. of CHI 2024*, ACM, doi: 10.1145/3613904.3642031
4. F. Bu, S. Li, D. Goedicke, **M. Colley**, G. Sharma, and W. Ju, Portobello: Extending Driving Simulation from the Lab to the Road
*In Proc. of CHI 2024*, ACM, doi: 10.1145/3613904.3642341
**CHI Honorable Mention Award for Best Paper (top 5%)**
5. P. Jansen, J. Britten, A. Häusele, T. Segschneider, **M. Colley** and E. Rukzio, AutoVis: Enabling Mixed-Immersive Analysis of Automotive User Interface Interaction Studies
*In Proc. of CHI 2023*, ACM, doi: 10.1145/3544548.3580760, [Website Link]
6. M. Lanzer, I. Koniakowsky, **M. Colley** and M. Baumann, Interaction Effects of Pedestrian Behavior, Smartphone Distraction and External Communication of Automated Vehicles on Crossing and Gaze Behavior
*In Proc. of CHI 2023*, ACM, doi: 10.1145/3544548.3581303
7. J. O. Rixen, **M. Colley**, A. Askari, J. Gugenheimer and E. Rukzio, Consent in the Age of AR: Investigating The Comfort With Displaying Personal Information in Augmented Reality
*In Proc. CHI 2021*, ACM, doi: 10.1145/3491102.3502140
8. **M. Colley**, E. Bajrovic and E. Rukzio, Effects of Pedestrian Behavior, Time Pressure, and Repeated Exposure on Crossing Decisions in Front of Automated Vehicles Equipped with External Communication
*In Proc. CHI 2022*, ACM, doi: 10.1145/3491102.3517571
9. J. O. Rixen, T. Hirzle, **M. Colley**, Y. Etzel, E. Rukzio and J. Gugenheimer, Exploring Augmented Visual Alterations in Interpersonal Communication
*In Proc. CHI 2021*, ACM, doi: 10.1145/3411764.3445597
10. **M. Colley**, B. Eder, J. O. Rixen and E. Rukzio, Effects of Semantic Segmentation Visualization on Trust, Situation Awareness, and Cognitive Load in Highly Automated Vehicles
*In Proc. CHI 2021*, ACM, doi: 10.1145/3411764.3445351
11. K. Holländer*, **M. Colley***, E. Rukzio and A. Butz, A Taxonomy of Vulnerable Road Users for HCI Based On A Systematic Literature Review
*In Proc. CHI 2021*, ACM, doi: 10.1145/3411764.3445480
12. **M. Colley**, M. Walch, J. Gugenheimer, A. Askari and E. Rukzio, Towards Inclusive External Communication of Autonomous Vehicles for Pedestrians with Vision Impairments
*In Proc. CHI 2020*, ACM, doi:, 10.1145/3313831.3376472
**CHI Honorable Mention Award for Best Paper (top 5%)**
13. K. Rogers, **M. Colley**, D. Lehr, J. Frommel, M. Walch, L. E. Nacke and M. Weber, KickAR: Exploring Game Balancing Through Boosts and Handicaps in Augmented Reality Table Football
*In Proc. CHI 2018*, ACM, doi: 10.1145/3173574.3173740

**IMWUT**

1. **M. Colley***, S. Hartwig*, A. Zeqiri, T. Ropinski and E. Rukzio, AutoTherm: A Dataset and Benchmark for Thermal Comfort Estimation Indoors and in Vehicles
*In Proc. IMWUT 2024*, ACM, *Joint First Authors, doi: 10.1145/3678503

2. A. Stampf, **M. Colley**, A. Knuth, C. Tasci and E. Rukzio, Examining Psychological Conflict-Handling Strategies for Highly Automated Vehicles to Resolve Legal User-Vehicle Conflicts
   *In Proc. IMWUT 2024*, ACM, doi: 10.1145/3678511

3. A. Stampf, M. Sasalovici, L. Meinhardt, **M. Colley**, M. Giss and E. Rukzio, Move, Connect, Interact: Introducing a Design Space for Cross-Traffic Interaction
   *In Proc. IMWUT 2024*, ACM, doi: 10.1145/3678580

4. L. Meinhardt, M. Rück, J. Zähnle, M. Elhaidary, **M. Colley**, M. Rietzler and E. Rukzio, Hey, What's Going On? Conveying Traffic Information to People with Visual Impairments in Highly Automated Vehicles: Introducing OnBoard
   *In Proc. IMWUT 2024*, ACM, doi: 10.1145/3659618

5. **M. Colley**, O. Speidel, J. Strohbeck, J. O. Rixen, J. H. Belz and E. Rukzio, Effects of Uncertain Trajectory Prediction Visualization in Highly Automated Vehicles on Trust, Situation Awareness, and Cognitive Load
   *In Proc. IMWUT 2023*, ACM, doi: 10.1145/3631408, [Video Link]

6. **M. Colley***, L. Meinhardt*, A. Fassbender, M. Rietzler and E. Rukzio, Come Fly With Me - Investigating the Effects of Path Visualizations in Automated Urban Air Mobility
   *In Proc. IMWUT 2023*, ACM, doi: 10.1145/3596249, *Joint First Authors

7. **M. Colley**, J. Britten and E. Rukzio, Scalability in External Communication of Automated Vehicles: Evaluation and Recommendations
   *In Proc. IMWUT 2023*, ACM, doi: 10.1145/3596248

8. P. Jansen, **M. Colley** and E. Rukzio, A Design Space for Human Sensor and Actuator Focused In-Vehicle Interaction Based on a Systematic Literature Review
   *In Proc. IMWUT 2022*, ACM, doi: 10.1145/3534617

9. **M. Colley**, M. Rädler, J. Glimmann and E. Rukzio, Effects of Scene Detection, Scene Prediction, and Maneuver Planning Visualizations on Trust, Situation Awareness, and Cognitive Load in Highly Automated Vehicles
   *In Proc. IMWUT 2022*, ACM, doi: 10.1145/3534609, [Video Link]

10. **M. Colley**, P. Jansen, E. Rukzio and J. Gugenheimer, SwiVR-Car-Seat: Exploring Vehicle Motion Effects on Interaction Quality in Virtual Reality Automated Driving Using a Motorized Swivel Seat
    *In Proc. IMWUT 2021*, ACM, doi: 10.1145/3494968

11. **M. Colley**, S. Krauß, M. Lanzer and E. Rukzio, How Should Automated Vehicles Communicate Critical Situations? A Comparative Analysis of Visualization Concepts
    *In Proc. IMWUT 2021*, ACM, doi: 10.1145/3478111

## FURTHER PUBLICATIONS

### Journal paper

Transportation Research Part F, with an impact factor of 4.60 (2022), and the International Journal of Human-Computer Studies, with an impact factor of 5.40 (2024), are considered to be top-tier journals in traffic psychology.

1. P. Jansen*, **M. Colley***, T. Pfeifer, and E. Rukzio, Visualizing Imperfect Situation Detection and Prediction in Automated Vehicles: Understanding Users
   *In Transportation Research Part F: Traffic Psychology and Behaviour 2024*, Elsevier, *Joint First Authors, doi: 10.1016/j.trf.2024.05.015

2. A. Stampf, A. Knuth, **M. Colley**, and E. Rukzio, Law and Order: Investigating the Effects of Conflictual Situations in Manual and Automated Driving in a German Sample
   *In International Journal of Human-Computer Studies 2024*, Elsevier, doi: 10.1016/j.ijhcs.2024.103260

3. **M. Colley**, B. Wankmüller, T. Mend, T. Väth, E. Rukzio and J. Gugenheimer, User Gesticulation Inside an Autonomous Vehicle with External Communication can Cause Confusion in Pedestrians and a Lower Willingness to Cross
   *In Transportation Research Part F: Traffic Psychology and Behaviour 2022*, Elsevier, doi: 10.1016/j.trf.2022.03.011

4. **M. Colley**, C. Hummler and E. Rukzio, Effects of Mode Distinction, User Visibility, and Vehicle Appearance on Mode Confusion When Interacting With Highly Automated Vehicles
   *In Transportation Research Part F: Traffic Psychology and Behaviour 2022*, Elsevier, doi: 10.1016/j.trf.2022.06.020

5. **M. Colley**, S. Mytilineos, M. Walch, E. Rukzio and J. Gugenheimer, Requirements for the Interaction With Highly Automated Construction Site Delivery Trucks
   *In Proc. Frontiers 2022*, Frontiers, doi: 10.3389/fhumd.2022. 794890

6. M. Lanzer, T. Stoll, **M. Colley** and M. Baumann, Intelligent Mobility in the City: The Influence of System and Context Factors on Drivers' Takeover Willingness and Trust in Automated Vehicles
   *In Proc. Frontiers 2021*, Frontiers, doi: 10.3389/fhumd.2021.676667

### Conference full paper

1. P. Fink, H. Milne, A. Caccese, M. Alsamsam, J. Loranger, **M. Colley**, N. Giudice, Accessible Maps for the Future of Inclusive Ridesharing
   *In Proc. AutoUI 2024*, ACM, doi: 10.1145/3640792.3675736

2. A. Asha, **M. Colley**, S. Sultana, E. Sharlin, Introducing AV-Sketch: An Immersive Participatory Design Tool for Automated Vehicle — Passenger Interaction
   *In Proc. AutoUI 2024*, ACM, doi: 10.1145/3640792.3675705

3. P. Ebel, P. Bazilinskyy, **M. Colley**, C. Goodridge, P. Hock, C. Janssen, H. Sandhaus, A. Srinivasanm, P. Wintersberger, Changing Lanes Toward Open Science: Openness and Transparency in Automotive User Research
   *In Proc. AutoUI 2024*, ACM, doi: 10.1145/3640792.3675730

4. A. Stampf, **M. Colley**, B. Girst, E. Rukzio, Exploring Passenger-Automated Vehicle Negotiation Utilizing Large Language Models for Natural Interaction
   *In Proc. AutoUI 2024*, ACM, doi: 10.1145/3640792.3675725

5. A. Stampf* and **M. Colley***, Deriving Non-Driving-Related Activities in Highly Automated Driving via an Autoethnographic Approach by Traveling Canada in a Recreational Vehicle
   *In Proc. MuC 2024*, *Joint First Authors, doi: 10.1145/3670653.3670663

6. T. Wagner*, **M. Colley***, D. Breckel, M. Kösel, and E. Rukzio, UnitEye: Introducing a User-Friendly Plugin to Democratize Eye Tracking Technology in Unity Environments
   *In Proc. MuC 2024*, *Joint First Authors, doi: 10.1145/3670653.3670655,

7. **M. Colley**\*, P. Jansen\*, J. J. Matthiesen\*, H. Hoberg, C. Reger and I. Thiermann, How Much Home Office is Ideal? A Multi-Perspective Algorithm
   *In Proc. CHIWORK 2023*, ACM, doi: [10.1145/3596671.3596672](10.1145/3596671.3596672), \*Joint First Authors

8. **M. Colley**, A. Stampf, W. Fischer and E. Rukzio, Effects of 3D Displays on Mental Workload, Situation Awareness, Trust, and Performance Assessment in Automated Vehicles
   *In Proc. MUM 2023*, ACM, doi: [10.1145/3626705.3627786](10.1145/3626705.3627786)

9. **M. Colley**, C. Evangelista, T. D. Rubiano and E. Rukzio, Effects of Urgency and Cognitive Load on Interaction in Highly Automated Vehicles
   *In Proc. MobileHCI 2023*, ACM, doi: [10.1145/3604254](10.1145/3604254)

10. J. O. Rixen, L. Meinhardt, M. Glöckler, A. Schlothauer, M. Ziegenbein, **M. Colley**, J. Gugenheimer and E. Rukzio, The Loop and Reasons to Break It: Investigating Infinite Scrolling Behaviour in Social Media Applications and Reasons to Stop
    *In Proc. MobileHCI 2023*, ACM, doi: [10.1145/3604275](10.1145/3604275)
    **MobileHCI Honorable Mention Award for Best Paper (top 5%)**

11. S. Suzuki, **M. Colley**, S. Li, I. Mandel, A. Stampf and W. Ju, AdVANcing Design: Customizing Spaces for Vanlife
    *In Proc. AutoUI 2023*, ACM, doi: [10.1145/3580585.3607175](10.1145/3580585.3607175)

12. M. Woide, L. Miller, **M. Colley**, N. Damm and M. Baumann, I've Got the Power: Exploring the Impact of Cooperative Systems on Driver-Initiated Takeovers and Trust in Automated Vehicles
    *In Proc. AutoUI 2023*, ACM, doi: [10.1145/3580585.3607165](10.1145/3580585.3607165)

13. **M. Colley**, J. O. Rixen, W. I. Pellegrino and E. Rukzio, (Eco-)Logical to Compare? - Utilizing Peer Comparison to Encourage Ecological Driving in Manual and Automated Driving
    *In Proc. AutoUI 2022*, ACM, doi: [10.1145/3543174.3545256](10.1145/3543174.3545256)

14. M. Woide, **M. Colley**, N. Damm and M. Baumann, Effect of System Capability Verification on Conflict, Trust, and Behavior in Automated Vehicles
    *In Proc. AutoUI 2022*, ACM, doi: [10.1145/3543174.3545253](10.1145/3543174.3545253)

15. A. Stampf, **M. Colley** and E. Rukzio, Towards Implicit Interaction in Highly Automated Vehicles - A Systematic Literature Review
    *In Proc. MobileHCI 2022*, ACM, doi: [10.1145/3546726](10.1145/3546726)

16. **M. Colley**, T. Fabian and E. Rukzio, Investigating the Effects of External Communication and Automation Behavior on Manual Drivers at Intersections
    *In Proc. AutoUI 2022*, ACM, doi: [10.1145/3546711](10.1145/3546711)

17. P. Hock\*, **M. Colley**\*, A. Askari, T. Wagner, M. Baumann and E. Rukzio, Introducing VAMPIRE – Using Kinaesthetic Feedback in Virtual Reality for Automated Driving Experiments
    *In Proc. AutoUI 2022*, ACM, doi: [10.1145/3543174.3545252](10.1145/3543174.3545252)

18. **M. Colley**, J. Britten, S. Demharter, T. Hisir and E. Rukzio, Feedback Strategies for Crowded Intersections in Automated Traffic — A Desirable Future?
    *In Proc. MobileHCI 2022*, ACM, doi: [10.1145/3543174.3545255](10.1145/3543174.3545255)

19. M. Haimerl, **M. Colley** and A. Riener, Evaluation of Common External Communication Concepts of Automated Vehicles for People With Intellectual Disabilities
    *In Proc. MobileHCI 2022*, ACM, doi: [10.1145/3546717](10.1145/3546717)

20. T. Müller\*, **M. Colley**\*, G. Dogru and E. Rukzio, AR4CAD: Creation and Exploration of a Taxonomy of Augmented Reality Visualization for Connected Automated Driving
    *In Proc. MobileHCI 2022*, ACM, doi: [10.1145/3546712](10.1145/3546712)
    **MobileHCI Honorable Mention Award for Best Paper (top 5%)**

21. **M. Colley**, B. Wankmüller and E. Rukzio, A Systematic Evaluation of Solutions for the Final 100m Challenge of Highly Automated Vehicles
    *In Proc. MobileHCI 2022*, ACM, doi: [10.1145/3546713](10.1145/3546713)

22. **M. Colley**, J. H. Belz and E. Rukzio, Investigating the Effects of Feedback Communication of Autonomous Vehicles
    *In Proc. AutoUI 2021*, ACM, doi: [10.1145/3409118.3475133](10.1145/3409118.3475133)

23. **M. Colley**, A. Askari, M. Walch, M. Woide and E. Rukzio, ORIAS: On-The-Fly Object Identification and Action Selection for Highly Automated Vehicles
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## Demos

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## Videos

- R. Bernhaupt, **M. Colley**, D. Goedicke, A. Meschtscherjakov, B. Pfleging, A. Riener, and S. Sadeghian, A Critical Perspective on Radically Innovating Personal Mobility
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## Workshop position papers

1. **M. Colley** and E. Rukzio, Challenges of Explainability, Cooperation, and External Communication of Automated Vehicles at CHI 2022
2. M. Walch, **M. Colley**, P. Hock, E. Rukzio and M. Weber, Turn Drivers Into Users and Keep Them Out-Of-The-Loop to Save Energy at CHI 2020

3. **M. Colley**, M. Walch and E. Rukzio, Towards Reducing Energy Waste through Usage of External Communication of Autonomous Vehicles at CHI 2020