A long, straight asphalt road stretches into the distance through a rural landscape. The road is flanked by rolling hills and fields. The sky is overcast with grey clouds, and the lighting suggests a late afternoon or early morning setting. The road has a dashed yellow center line and solid white edge lines. The fields are a mix of green and golden-brown, and there are some hay bales visible in the distance on the right side.

Lessons learned on the road to a lecturer position

Dr. Florian Weidner, Lecturer,
University of Glasgow

Timeline



Context



Location: open (not to 🔥).



Money: more than as a postdoc.



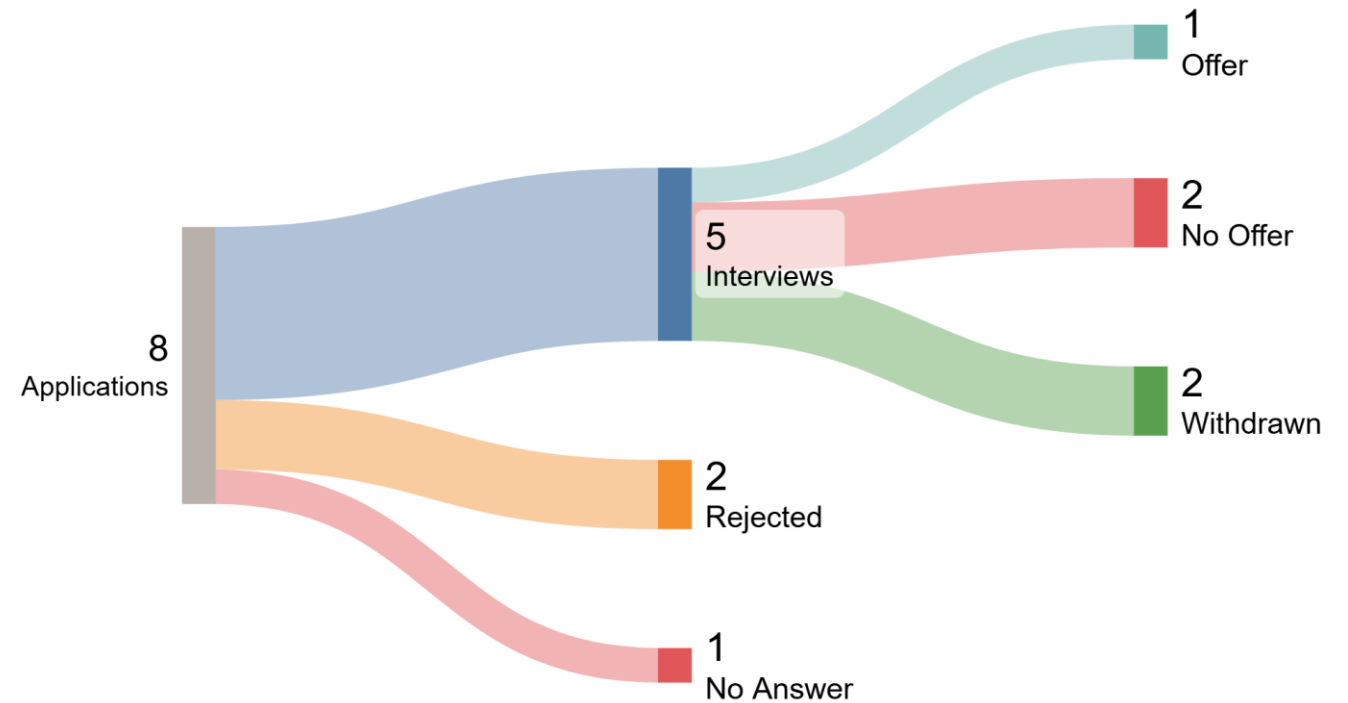
Discipline: HCI and XR



Environment: Larger than Lancaster. Highly collaborative. Interdisciplinary.

Meta-Info

- France, UK, Finland, Germany
- Job titles:
 - Lecturer
 - Assistant Professor
 - Professor
 - Junior Professor



Made at SankeyMATIC.com

Lesson 1

Do I **really** want **that** position?

Lesson 2

Stop if you feel uneasy.

Lesson 3

Applying is a second job.

Lesson 4

Re-use but customize.

Lesson 5

Customize. Heavily.

- University goals. School goals. Group goals. Individual researchers. Sprinkle in keywords. Align with your research (Lesson 2!)
- Namedrop international, national, and University grants.
- Explicitly state potential collaborations!

Lesson 6

Be yourself.

→ If you fake it till you make it, everyone will be unhappy.

Lesson 7

Know your plans.

- First grant proposal?
- First PhD topic?

Lesson 8

Most are online. Stand up.

“Lesson” 9

Research fit seems to be key.

“Lesson” 10

High-quality reference letters.



+

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Research Statement

My structure for research statement(s)

- Header and Intro

Research Statement

Dr.-Ing. Florian Weidner

LA1 4UE Lancaster, United Kingdom

www.florianweidner.de | hello@florianweidner.de

“After all, you can't have the applications without the curiosity-driven research behind it. Learning more about science — science for science's sake — is worth supporting.”

Prof. Dr. Donna Strickland, Recipient of the Nobel Prize in Physics 2018

MOTIVATION

My research focuses on the intersection of Human-Computer Interaction and mixed reality (MR). On the one hand, I want to understand and improve how humans efficiently and effectively interact with MR, looking at performance and overall quality of experience (**MR as a medium**). On the other hand, I want to use AR and VR to understand human behaviour, perception, and cognition (**MR as a tool**). To do this, I combine human-computer interaction with mechanical, electrical, and software engineering to develop systems, prototypes, and user studies exploring humans, systems, and their interaction in MR across application domains.

My structure for research statement(s)

- Header and Intro
- Paragraphs of what I have done, highlighting contributions (nobody wants to read)

RESEARCH AND APPROACHES

Novel In-Car User Interfaces

My dissertation focused on stereoscopic dashboards in cars. Reacting to the increasing digitisation and amount of information in cars, I built a driving simulator with VR simulation and a car mock-up featuring an integrated large spatial augmented reality dashboard. I performed several user studies investigating this technology's effectiveness in various use cases. The topics covered perception, design, information visualisation, trust and safety, and 3D interaction. A summary of all results is provided in my dissertation [7]. Overall, **I established the foundation for future studies on large interactive S3D dashboards.**

Avatars and Agents in MR

After my PhD, I focused on virtual humans in MR. Driven by how virtual humans should be displayed (auralization and visualisation) and what an effective communication experience depends on, we successfully applied for two grants. They focus on social MR for older adults (CO-HUMANICS [↗](#), academia-only) and multi-party communication (MULTIPARTIES [↗](#), cooperation between industry and academia). Within these projects, I first reviewed the literature on the visualisation of virtual humans in MR and then investigated different audiovisual representations in several follow-up user studies about the influence of age [4], and movement and audiovisual congruence [1, 5]. The **importance of this work lies in the investigation of augmented reality virtual humans and older adults as a user group — both are under-researched areas but with high value.**

Gaze in MR

Next to virtual humans, my current research includes understanding gaze during interaction and integrating gaze into user interfaces. Gaze (head and eye gaze) can advance 3D interaction when integrated into implicit and explicit techniques and adequately understood. **We want to leverage gaze's potential for 3D interaction.** Ongoing projects I am involved in include gaze-based viewport control [2], the intricacies of head movements in MR [3], head pointing with modified control-display gain (submitted to TOCHI), modeling neck strain via EMG during longer interactions with head-mounted displays (in preparation), and understanding eye dominance (in preparation). My core research is investigating and

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- 1-2 research goals (again: contribution)

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- Paragraphs of what I have done, highlighting contributions (nobody wants to read)
- 1-2 research goals (again: contribution)
- Some impact statement
 - citations
 - Non-uni activities

IMPACT

Throughout my academic career, I established a robust presence within the MR and Human-Computer Interaction (HCI) communities. Continuing, I strive to contribute substantially to academia and industry

2

in both fields. Notably, I have bridged the gap between these disciplines, playing a pivotal role in writing several interdisciplinary grant proposals involving both research institutions and industry partners. Furthermore, my scholarly output has garnered significant recognition, evidenced by citations exceeding 240 (Google Scholar). This underscores the depth and breadth of my research's impact within the academic community, reinforcing my dedication to advancing knowledge and innovation at the intersection of these domains. Outside academia, I have engaged with the public by founding and hosting the local "AR/VR Meetup" which is now part of the network "Games & XR Central Germany". I am eager to engage in further activities so that my work and research positively affect society.

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- Some impact statement
 - citations
 - Non-uni activities
- Summary
 - Relation to group
 - Culture fit

(and references)

SUMMARY

My primary field of research is Human-Computer Interaction with the clear specialization in Virtual, Augmented, and Mixed Reality. The outlined research agenda heavily relies on both concepts. Both directions, social MR and everyday MR, present exciting research opportunities that I would be excited to explore [REDACTED]. I believe that my research aligns strongly with [REDACTED] interdisciplinary research domains. Both directions form inherent connections to the three themes summarized by [REDACTED]. In addition, [REDACTED] previous research on confined spaces is related to Ubiquitous MR and the showcase [REDACTED] is related to my interest in Social XR. Several other areas also pique my interest, including the real-time measurement and estimation of AR/VR-related concepts like embodiment and presence through analysing physiological signals (e.g., heart rate, skin conductance, and ECG) and user behaviour (especially pose, gaze, and mimic).

My structure for research statement(s)

- Header and Intro*
- Paragraphs of what I have done, highlighting contributions (nobody wants to read)*
- 1-2 research goals (again: contribution)*
- Some impact statement
 - citations
 - Non-uni activities
- Summary
 - Relation to group*
 - Culture fit*

(and references)

Teamwork and collaboration are critical components to success. Having previously managed the XR laboratory at Technische Universität Ilmenau, Germany, and currently overseeing lab infrastructure at Lancaster University, UK, I am excited to engage with the [REDACTED]. Collaborating with experts from various domains and institutions, such as [REDACTED] team and the broader computer science department at [REDACTED] is an exciting opportunity I look forward to. I am impressed by [REDACTED] commitment to equality, diversity, inclusion, and hybrid work, and I share this dedication. My goal is to contribute to a positive and inspiring campus life through management activities and outreach at the [REDACTED].

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- Paragraphs of what I have done, highlighting contributions (nobody wants to read)*
- 1-2 research goals (again: contribution)*
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 - Non-uni activities
- Summary
 - Relation to group*
 - Culture fit*

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- Changed lots.
- Adjust research but stay true.
- Needs to fit group/uni/school!
- 1-3 pages.

Teaching Statement

My structure for teaching statement(s)

- Header and Intro

Teaching Statement

Dr.-Ing. Florian Weidner

LA1 4UE Lancaster, United Kingdom

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“After all, you can't have the applications without the curiosity-driven research behind it. Learning more about science — science for science's sake — is worth supporting.”

Prof. Dr. Donna Strickland, Recipient of the Nobel Prize in Physics 2018

INTRODUCTION

In the words of Nobel laureate Donna Strickland, curiosity is the cornerstone of scientific exploration. As an educator, I aim to ignite and **nurture curiosity** within students, fostering an environment where questioning and exploration are encouraged. I am committed to **empowering students** from diverse backgrounds to engage in the creation and critique of technology. Recognizing the multifaceted nature of learning, I aim to deliver a blend of knowledge (factual, conceptual, procedural, and metacognitive) while following the **expectancy-value-cost model of motivation**¹. I prioritize **interactive and personalized communication** to enhance student learning. Through these efforts, I aim to inspire the next generation of scholars to pursue careers driven by curiosity and innovation.

My structure for teaching statement(s)

- Header and Intro
- Para with course work
 - at best, with eval or prize or something
 - Teaching and designing valued

My teaching journey began during my undergraduate studies at Technische Universität Dresden, Germany, where I worked as a teaching assistant for the course "Media Psychology and Didactics", guiding students through coursework and offering support as they navigated the subject matter. Since then, **I have taught seminars (7) and lectures (1) and was involved in course design (2)**. Notably, I taught laboratory courses such as "Augmented and Virtual Reality" and "Computer Games (AR/VR)" to teach engineering and computer science students practical skills in Unity, Unreal Engine, and AR/VR technologies, concluding in the development of small-scale AR or VR games. Additionally, I created "Augmented/Virtual Reality for Communication Science", a course bridging technical and non-technical domains by integrating theoretical foundations with interactive tutorials and laboratory sessions. This course, which I designed by myself, provides students with a foundational understanding of HCI principles, AR/VR applications, experimental design, and user-centric evaluation techniques. I am proud of the enduring impact of this course (which Technische Universität Ilmenau still offers) as it serves as an essential introduction for students entering the field, fostering a nuanced understanding of the relationship between technology and humans and preparing them for future endeavours with a user-centred approach. I was also happy to give the lecture "Virtual Worlds and Digital Games" by myself in 2021, which included completely redesigning the course and adapting it for hybrid teaching. The Technische Universität Ilmenau recognized the **quality of my efforts with an award and a prize of 1.000 EUR**.

My structure for teaching statement(s)

- Header and Intro
- Para with course work
 - at best, with eval or prize or something
 - Teaching and designing valued
- Para with student projects

...recognized the quality of my course with an award and a prize of £1000 each.

In addition, I have extensive experience supervising students during project work and thesis. **I supervised 15 student projects** — extensive, multi-week applied research assignments and an integral component of the student's study program. It is noteworthy that all participants actively opted for my course. Additionally, **I supervised 21 bachelor's and master's theses**, collaborating with exceptional students from diverse disciplines and backgrounds. A significant portion of these theses, 13 in total, were presented at ACM and IEEE conferences, underscoring the quality of research and teaching. The breadth of topics

My structure for teaching statement(s)

- Header and Intro
- Para with course work
 - at best, with eval or prize or something
 - Teaching and course design
- Para with student projects
- Para on teaching approach

...ing simulations, AI applications for prototyping, factory interfaces, and virtual humans.

Following the **expectancy-value-cost model of motivation**, I maintain three objectives across all classes and projects: Firstly, I establish clear expectations by defining incremental and scaffolded learning objectives. Secondly, I emphasize the intrinsic value of tasks and content by highlighting their relevance to other domains, industry applications, and ongoing research. Lastly, I minimize the cost of learning by providing students with the necessary tools and support and designing learning assignments manageable within the given timeframe. Central to my approach is the personalized guidance offered to each student, tailored to their backgrounds, project interests, learning objectives (such as the acquisition of technical proficiency or qualitative research experience), and long-term aspirations. I am committed to striking a harmonious balance between the diverse prior experiences of my students, their personal growth trajectories, and the alignment of their projects with ongoing research.

My structure for teaching statement(s)

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- Para with course work
 - at best, with eval or prize or something
 - Teaching and course design
- Para with student projects
- Para on teaching approach
- Motivation

trajectories, and the alignment of their projects with ongoing research.

Teaching became a mandatory part of my role only during my postdoctoral position at Technische Universität Ilmenau. Beyond this obligatory engagement, my passion for teaching, the intrinsic value of learning through teaching, and the collaborative spirit inherent when working alongside students have been the primary drivers for teaching. Across these diverse experiences, I have discovered that the connections forged with individual students stand out as some of the most gratifying professional relationships I have cultivated throughout my career.

My structure for teaching statement(s)

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 - at best, with eval or prize or something
 - Teaching and course design
- Para with student projects
- Para on teaching approach
- Motivation
- Postgrad

MENTORING EXPERIENCE

Numerous students, including those from under-represented groups such as women and people of colour, pursued further academic careers as PhD candidates following their thesis completion under my supervision. Additionally, all students I supervised during their thesis achieved remarkable success securing roles across various industries, from software engineering to journalism.

My role as a mentor has become well-established, particularly among younger PhD candidates at Technische Universität Ilmenau and Lancaster University. Peers regularly seek my guidance on refining their research trajectories, navigating challenges with their advisors and overcoming obstacles within the academic system. In addition, I have been lucky to share my experiences with and support students who are the first in their families to attend university. I am honoured by the trust and aim to support people however I can.

My structure for teaching statement(s)

- Header and Intro
- Para with course work
 - at best, with eval or prize or something
 - Teaching and course design
- Para with student projects*
- Para on teaching approach
- Motivation
- Postgrad
- Contribution to local teaching
 - Strongly relate.*
 - Offer new courses.*

EXAMPLE COURSES

My interdisciplinary background and prior teaching experience have prepared me to teach (or support teaching) undergraduate and graduate-level courses and a broad range of intro-level computer science and information science courses [REDACTED]

[REDACTED]. I am also very eager and excited to teach courses like [REDACTED] Computer Interaction (for Mixed Reality), [REDACTED]

In addition, I particularly enjoy supervising students during larger projects [REDACTED] and theses.

In addition, I am excited to develop new graduate level courses such as:

- Multisensory and Multimodal Mixed Reality
- Design & Prototyping for Mixed Reality
- Social and Everyday Mixed Reality

My structure for teaching statement(s)

- Header and Intro
- Para with course work
 - at best, with eval or prize or something
 - Teaching and course design
- Para with student projects*
- Para on teaching approach
- Motivation
- Postgrad
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EXAMPLE COURSES

My interdisciplinary background and prior teaching experience have prepared me to teach (or support teaching) undergraduate and graduate-level courses and a broad range of intro-level computer science and information science courses [REDACTED]

[REDACTED]. I am also very eager and excited to teach courses like [REDACTED]

In addition, I particularly enjoy supervising students during larger projects [REDACTED] and theses.

In addition, I am excited to develop new graduate level courses such as:

- Multisensory and Multimodal Mixed Reality
- Design & Prototyping for Mixed Reality
- Social and Everyday Mixed Reality

- Almost static (except length)
- 1-2 pages



Cover Letter

My structure for cover letter

- Header and Intro
 - Trajectory
 - Why I'm a fit



April 16, 2024

Application: Assistant/Associate Professor in Human-Computer Interaction

Dear Members of the Selection Committee

I am writing to apply for the [REDACTED]. I am applying for this position because my research aligns with the job description, [REDACTED] broad research themes are inspiring, and the team's previous work, such as [REDACTED], is related to my research.

I was awarded a PhD in computer science from Technische Universität Ilmenau, Germany. Currently, I am a Senior Research Associate at Lancaster University, UK, where I research the intersection of gaze, ubiquitous computing, mixed reality (MR) and haptic user interfaces, supervise students, advise PhD students, and support grant writing. Based on my research trajectory and experience in MR, prototyping, and user-centred evaluation, I have the necessary drive and skills to develop myself and contribute to [REDACTED]'s growth.

My structure for cover letter

- Header and Intro
 - Trajectory
 - Why I'm a fit
- Blob about prior research (custom)

My PhD was about spatial augmented reality dashboards in cars: I built a driving simulator (hard- and software) and explored the design space of this in-car user interface, looking at perception, the impact of visualization on trust and task performance, and interaction. Since then, I have focused and published in the domains of social MR (e.g., the influence of modal congruency and fidelity), gaze in human-computer interaction (e.g., gaze-based interaction, gaze behaviour), and currently research everyday MR, specifically, how to repurpose everyday objects for MR interaction. All three themes provide ample opportunities to expand and complete my research. For example, my vision regarding

My structure for cover letter

- Header and Intro
 - Trajectory
 - Why I'm a fit
- Blob about prior research (custom)
- Paras about track record

Focusing on Human-Computer Interaction, I have (co-)authored 31 short and full papers and 12 smaller contributions (extended abstracts, work-in-progress) in ACM and IEEE conferences and journals (e.g., IEEE VR, IEEE TVCG, ACM CHI), accumulating over 240 citations (Google Scholar). In addition, I

Dr. Florian Weidner | www.florianweidner.de 

1

have a strong track record of successful grant applications, having (co-)authored eight successful grants (99.000 EUR as PI and 3,276.000 EUR as primary or co-author). My experience in successfully leading and orchestrating several multi-person research collaborations and organizing large grant applications across industry and academia demonstrates my research leadership skills.

Throughout my academic career, I was lucky to have taught exceptional students from diverse backgrounds. During lectures (1), seminars (7), projects (15), and bachelor (6) and master (15) theses, I had the pleasure of working with students from various disciplines. I also have experience in course development: I completely redesigned the course "Virtual Worlds and Digital Games" to make it fit for hybrid teaching, and I developed the course "AR/VR for Communication Science". For my teaching activities, I received the "Teaching Award 2021" from the Technische Universität Ilmenau (awarded 1.000 Euro). Together, my research and teaching experience equip me to teach existing classes like

My structure for cover letter

- Header and Intro*
 - Trajectory
 - Why I'm a fit
- Blob about prior research (custom)*
- Paras about track record*
- Outro*

I am confident I meet all the essential and desirable criteria in the job description ([redacted]). I believe in the success of collaborative research and aspire to deliver high-quality teaching in an inspiring and empowering environment. Additionally, I am enthusiastic about communicating with diverse audiences to drive meaningful impact outside academia and would be happy to support managing the [redacted] group and the broader university.

Thank you for your time in processing my application, and I look forward to discussing this matter with you and your colleagues in detail in the future.

Yours sincerely,

My structure for cover letter

- Header and Intro*
 - Trajectory
 - Why I'm a fit
- Blob about prior research (custom)*
- Paras about track record*
- Outro*

I am confident I meet all the essential and desirable criteria in the job description ([REDACTED]). I believe in the success of collaborative research and aspire to deliver high-quality teaching in an inspiring and empowering environment. Additionally, I am enthusiastic about communicating with diverse audiences to drive meaningful impact outside academia and would be happy to support managing the [REDACTED] group and the broader university.

Thank you for your time in processing my application, and I look forward to discussing this matter with you and your colleagues in detail in the future.

Yours sincerely,

I always tried to cover all key criteria from job description in cover letter so they *cannot reject me*.



Research Presentation

Research Presentation

- Intro and background (2 slides)
- Prev and current research (1-3 slides)
- Quickly go into vision (4-8 slides)
- Outline connection to
 - Group (1 slide)
 - Wider research environment (1 slide)
- Teaching experience (1 slide)
- Backup slides (1 each)
 - 1st PhD
 - 1st project proposal

Research Presentation

- Intro and background (2 slides)
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 - Group (1 slide)
 - Wider research environment (1 slide)
- Teaching experience (1 slide)
- Backup slides (1 each)
 - 1st PhD
 - 1st project proposal

Some slides can be reused.
Takes ages to tailor.



Thank you! Questions?

www.florianweidner.de

hello@florianweidner.de

