

Francesco Chiossi

Researcher & Human Factor Engineer

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I am a **Senior UX Researcher** specializing in **mixed-methods research**, **usability testing**, and **human factors**. I lead high-impact evaluations to refine **product-market fit** and inform strategic **decision-making**. With expertise in AI-driven insights, Mixed Reality and human-centered design, I bridge research and strategy to optimize user experiences and drive user-aligned innovation.

Experience

Senior UX Researcher

Austrian Science Fund - LMU Munich | Nov 24 - Present | Full time

- Spearhead AI-driven research projects on intention communication for AI systems, leading a multidisciplinary team of 5 researchers.
- Established a toolbox of communication & evaluation methods, improving collaboration with autonomous systems in diverse scenarios.
- Delivered user-centered design solutions for autonomous robots, enhancing usability and user trust.
- Present research findings in cross-disciplinary forums and contribute to actionable design guidelines for AI systems.

UX Researcher

LMU Munich | Oct 2019 - Nov 2024 | Full time

- Led research strategy and execution for Mixed Reality and AI interfaces projects, collaborating with UX designers and software developers to translate user insights into design recommendations.
- Defining research hypothesis, leading experimental design and user studies, data collection for 30+ studies, implementing user state detection algorithms
- Leading research projects in teams of 3 to 14 stakeholders.
- Hired and developed a 7+ cross-functional team. Managed over €100k in research funding.
- Teaching Msc & BsC classes, e.g., Physiological Computing, Engineering for Human Factors, User Interface Design. Prepared course materials and provided written feedback for 400+ students with high ratings.

Applied Scientist & Biosignal Data Analyst

Padua Neuroscience Center | 2018 - 2019 | Full time

- Designed experiments to improve the usability and safety of intelligent interactive systems.
- Conducted data collection and analysis for physiological and behavioral studies, ensuring usability insights informed hardware-software interfaces.
- Teaching Msc & BsC classes, e.g., "Cognitive Electrophysiology" (30+ students).

Research Associate

Neurotechnology Lab, TU Berlin | 2017 | Full time

- Developed an AI system for real-time detection of semantic expectancy violations.
- Designed multimodal ML models to predict user expectations in sentence completion, enhancing semantic processing efficiency.

Education

PhD Computer Science

2019 - 2024 | LMU Munich

Physiologically Adaptive Systems Across the Mixed Reality Continuum

Supervisors : Albrecht Schmidt, Sven Mayer

Focus : HCI, UX Research, AI Interfaces, Mixed Reality, Mixed-methods, Prototyping

MSc in Applied Cognitive Science

2015 - 2017 | University of Padua | 110/110

Developing a Brain-Computer Interface based on Semantic Expectancy

Focus : Quantitative methods, Machine Learning, Physiological Computing

BsC in Cognitive and Biological Psychology

2012 - 2015 | University of Padua | 105/110

Evaluating Neural Mechanisms of Conflict Monitoring

Focus : HCI, Cognitive Ergonomics, Human Factors, Artificial Intelligence, Executive Functions

Skills

UX Quantitative Methods : Statistical & Multivariate Analysis, Machine Learning, Time-Series Analysis, Signal Processing, Usability Testing (Formative & Summative)

UX Qualitative Research Methods : Interviews, focus groups, thematic analysis, grounded theory, inductive open coding

Experimental Design : Designing experiments concerning validity, reliability, and replicability

Project Management & Organisation : Structuring processes, Managing crossfunctional remote and local teams, Information Architecture

Data Analysis : Python (MNE, TensorFlow, Keras, Scikit) R, Matlab, MySQL

Design : Adobe Photoshop, Suite, Illustrator, Figma, InDesign

Selected Projects

SensCon: Embedding Physiological Sensing into VR Controllers

Lead Researcher for Hardware Prototyping and Evaluation

Team of 5 | 2023

We developed SensCon, embedding EDA and PPG sensors into VR controllers for real-time physiological data collection. In a user study, SensCon achieved 95% accuracy compared to medical-grade devices while significantly improving usability (SUS score: 82.5). To ensure safety and effectiveness, we conducted hazard analyses, identified user needs, and applied risk mitigation strategies in line with ISO 14971 guidelines. This system enables adaptive VR environments and offers an open-source solution for integrating physiological sensing into interactive systems. SensCon is now being used by research institutions and companies for large-scale studies on user experience and physiological interaction

Enhancing User Interaction in Mixed Reality: Visual Search in Mixed Reality Environments

Lead Researcher | Team of 8 | 2023 - 2024

Investigated how users search for physical and virtual objects in digitally augmented Mixed Reality environments. We used a multimodal evaluation (EEG, eye-tracking data, behavioral metrics) to assess cognitive load and information processing. We identified that AR environments significantly increased cognitive workload and visual search difficulty compared to AV and VR, providing insights to design adaptive systems that improve user experience in Mixed Reality.

Multimodal AI Interfaces for Attention Detection

Project Lead | Team of 9 | 2022 - 2024

Designed formative usability evaluations of multimodal AI systems using implicit data to detect internal and external attention in virtual reality. Developed machine learning models that classify attention states, achieving 85% accuracy. Demonstrated that adaptive systems, powered by machine learning, enhance both usability and task performance by dynamically responding to shifts in user attention in real-time, ultimately improving user experience and productivity.

Short-Form Videos and Cognitive Load: Impact on Prospective Memory

Lead Researcher | Team of 5 | 2023

With the rise of short-form video platforms like TikTok, we explored how continuous context switching impacts cognitive functions, particularly prospective memory. The study revealed that rapid media consumption reduced memory retention by 40% compared to longer content. We proposed design guidelines, such as slowing down content consumption and adding reflection prompts, to mitigate cognitive overload and improve memory retention in digital media environments.

Research Service

Late-Breaking Work Chair, CHI Work 2025

2024 - Present | Amsterdam, NL

- Recruit and manage submissions for emerging HCI research
- Oversee the review and selection process for late-breaking work
- Coordinate with the organizing team to execute the track on-site

Publicity Chair, Mobile HCI 2025

2024 - Present | Cairo, EGYPT

- Lead publicity efforts and recruit submissions for the conference
- Manage social media and promotional materials to increase visibility
- Collaborate with the organizing team to ensure consistent outreach

Program Committee & Reviewer

2019 - Present | Munich, GER

- Reviewer for top HCI venues including CHI, IUI, UIST, IEEE VR and top HCI journals.
- Delivered 100+ on-time reviews with consistently high usefulness ratings, contributing to the quality of peer-reviewed HCI research

Project Supervision & Mentoring

2019 - Present | Munich, GER

Supervised 40+ BSc and MSc theses, mentoring students in HCI research, design, and implementation

Awards

AVI '24 & VRST '22 Best Paper

Awarded to the best-reviewed papers (Top 1%)

Professional Workshops

I led workshops to bridge research and industry, training cross-functional teams with a focus on practical applications.

- **User-Centered Design in AI Systems**
- **UX in AI Personal Informatics Systems**
- **Wearables for Physiological Monitoring**
- **Multimodal Evaluation in Human Factors Engineering for Usability**