

Catarina G. Fidalgo

Curriculum Vitae

Research Focus

I am a fifth-year PhD Fellow in the CMU Portugal Dual Degree PhD Program in Human-Computer Interaction. My research explores how to improve Extended Reality (XR) training and collaboration, through leveraging different mechanisms to maintain awareness between people, within oneself, and in interaction with intelligent agents. I am primarily interested in XR, Training and Collaboration, and 3D User Interfaces.

Education

- 2021–Present **CMU Portugal Dual Degree PhD Fellow, Human-Computer Interaction (CMU) / Computer Science (IST)**, Carnegie Mellon University & Instituto Superior Técnico, Pittsburgh, USA & Lisbon, Portugal
Advised by Prof. David Lindlbauer and Prof. Augusto Esteves.
- 2019–2020 **Development of Master Thesis, Graphics & Interaction Group at INESC-ID**, Lisbon, Portugal
"MAGIC: Manipulating Avatars and Gestures to Improve Remote Collaboration" – Supervision of Professor Joaquim Jorge and Dr. Maurício Sousa
- 2014–2020 **Integrated MSc. Degree, Aerospace Engineering**, Instituto Superior Técnico, University of Lisbon, Lisbon, Portugal
- 2018–2019 **Exchange Program (1 year)**, Master's Studies, Indian Institute of Technology Madras, Chennai, India

Publications

- **Augmented Reality In-the-Wild: Patterns and Usage Experiences Working with AR Laptops in Real-World Settings.**
Yi Fei Cheng, Ari Carden, Hyunsung Cho, **Catarina G. Fidalgo**, Jonathan Wieland, David Lindlbauer. *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2025*
- **Exploring AR Hand Augmentations as Error Feedback Mechanisms for Enhancing Gesture-based Tutorials.**
Catarina G. Fidalgo, Yukang Yan, Mauricio Sousa, Joaquim Jorge, David Lindlbauer. *Frontiers in Virtual Reality 6 (2025)*
- **A Survey on Remote Assistance and Training in Mixed Reality Environments.**
Catarina G. Fidalgo, Yukang Yan, Hyunsung Cho, Mauricio Sousa, David Lindlbauer, Joaquim Jorge. *IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR 2023)*
- **MAGIC: Manipulating Avatars and Gestures to Improve Remote Collaboration.**
Catarina G. Fidalgo, Mauricio Sousa, Daniel Mendes, Rafael Kuffner dos Anjos, Daniel Medeiros, Karan Singh, Joaquim Jorge. *IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR 2023)*



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<https://catarinafidalgo.github.io/>

Technical & Language Skills

Technical Skills	Computational Mathematics (MATLAB), Statistical Analysis (SPSS), Control Systems (Real-Time Control, Flight Control), CAD (SolidWorks), Unity 3D, Graphical Design, Modeling, Sketching	Coding	Software Development (C, C++, C#, Python, Assembly), Web Development (HTML/CSS), Computer Networking (TCP, UDP, IPv4, IPv6)
Languages	Portuguese (Native), French (Bilingual), English (Working proficiency), German (Learning)		

Service & Volunteering

- 2025 **Student Volunteer**, *IEEE Conference on Virtual Reality and 3D User Interfaces*, Saint Malo, France
- 2024 **Associate Chair (AC)**, *ACM CHI Conference on Human Factors in Computing Systems (Late-Breaking Work)*
- 2024 **Program Committee SV**, *ACM Symposium on User Interface Software and Technology (UIST)*, Pittsburgh, USA
- 2023 **Student Volunteer Chair**, *ACM ISS Interactive Surfaces and Spaces Conference*, Pittsburgh, USA
- 2023 **Interactivity Juri Member**, *ACM CHI Conference on Human Factors in Computing Systems*, Hamburg, Germany
- 2022 **Student Volunteer**, *ACM Symposium on User Interface Software and Technology (UIST)*, Bend, USA
- 2022 **Student Volunteer**, *ACM CHI Conference on Human Factors in Computing Systems*, New Orleans, USA
- 2021 **Web Chairs Committee Member**, *IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR)*
- 2020 **Student Volunteer**, *ACM Interactive Surfaces and Spaces (ISS)*, Lisbon, Portugal

Teaching & Advising

Teaching — Instituto Superior Técnico, Computer Science Department (Master's Level)

- Teaching Assistant, Virtual Reality (1st Semester 2021).
- Teaching Assistant, User-Centered Design (1st Semester 2025).

Advising — Instituto Superior Técnico, Computer Science Department (Master's Thesis)

- Co-Advised with Augusto Esteves — Pedro Cruz, 2025–Present. Project: “The Effects of an AI Agent’s Appearance on Appropriate Reliance”.
- Co-Advised with Joaquim Jorge — João Galveias, 2021–2022. Thesis: “Towards Augmentative Communication in Virtual Environments”.



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