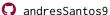
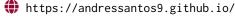
Andres Santos Torres, Ph.D.

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y @AndrsSntos

in Andrés Santos Torres







Employment History

Current

September 2022 – present

■ Teaching and Research Assistant with PhD. Interactive Systems Group (DEI LAB), Department of Computer Science and Engineering, School of Engineering, Carlos III of Madrid University, Madrid, Spain.

Past Appointments

May 2023 – August 2023

■ Visiting Researcher. Embodied Visualisation Lab (formerly known as Data Visualisation and Immersive Analytics Lab), Department of Human Centred Computer, Faculty of Information Technology, Monash University, Victoria, Australia.

2017 - 2022

■ Predoctoral Fellow. Interactive Systems Group (DEI LAB), Department of Computer Science and Engineering, School of Engineering, Carlos III of Madrid University, Madrid, Spain.

2015 - 2016

■ Teaching Assistant. Escuela Politécnica Nacional, Escuela de Formación de Tecnólogos, Quito, Ecuador.

2013 - 2015

Lab Technician. Escuela Politécnica Nacional. Electric and Electronics Faculty. Department of Electronics, Telecommunications, and Computer Networks. Computer Networks (LAN/WAN/WLAN) Lab.

Education

2017 - 2022

Ph.D., Computer Science and Technology. University Carlos III of Madrid.

Thesis title: The effects of interaction and visual representation of collaborative maps for immersive virtual environments.

2016 - 2017

M.Sc., Computer Science and Technology. University Carlos III of Madrid. Thesis title: *A comparative study of menus in virtual reality environments*.

2009 - 2014

■ Bsc. Eng. Electronics and Computer Networks. Escuela Politécnica Nacional del Ecuador.

Thesis title: Design and implementation of a prototype virtual shopping cart system using NFC communications and the Android system.

Research Publications

Journal Articles

- A. Santos-Torres, T. Zarraonandia, P. Díaz, and I. Aedo, "Comparing visual representations of collaborative map interfaces for immersive virtual environments," *IEEE Access*, vol. 10, pp. 55 136–55 150, 2022. ODI: 10.1109/ACCESS.2022.3176949.
- A. Santos-Torres, T. Zarraonandia, P. Diaz, T. Onorati, and I. Aedo, "An empirical comparison of interaction styles for map interfaces in immersive virtual environments," *Multimedia Tools and Applications*, vol. 79, pp. 35717–35738, 2020. ODI: 10.1007/s11042-020-08709-9.

Conference Proceedings

- A. Alshardy, S. Goodwin, A. Santos-Torres, and A. Liebman, "Virtual reality for enhancing engagement with net zero transitions," in 2023 Workshop on Energy Data Visualization (EnergyVis), 2023, pp. 21–26.

 DOI: 10.1109/EnergyVis60781.2023.00011.
- T. Zarraonandia, P. Diaz, A. Santos, Á. Montero, and I. Aedo, "A toolkit for creating cross-reality serious games," in *Games and Learning Alliance: 7th International Conference, GALA 2018, Palermo, Italy, December 5–7, 2018, Proceedings 7*, Springer, 2019, pp. 297–307. ODI: 10.1007/978-3-030-11548-7_28.
- A. Santos, T. Zarraonandia, P. Diaz, and I. Aedo, "A virtual reality map interface for geographical information systems," in *Proceedings of the 2018 international conference on advanced visual interfaces*, 2018, pp. 1–3. ODI: 10.1145/3206505.3206580.
- A. Santos-Torres, T. Zarraonandia, P. Diaz, and I. Aedo, "Exploring interaction mechanisms for map interfaces in virtual reality environments," in *Proceedings of the xix international conference on human computer interaction*, 2018, pp. 1–7. ODI: 10.1145/3233824.3233828.
- A. Santos, T. Zarraonandia, P. Diaz, and I. Aedo, "A comparative study of menus in virtual reality environments," in *Proceedings of the 2017 ACM International Conference on Interactive Surfaces and Spaces*, 2017, pp. 294–299. ODI: 10.1145/3132272.3132277.

Participation in competitive research projects

Jan 2019 - Sep 2022

- Identifying the affordances of cross-reality to enhance collaboration (CROSSCOLLAB):
 - Role: Researcher
 - Funding entity: Spanish Research State Agency (AEI).

Sep 2017 – Dec 2020

- Pervasive and Affordable Technologies for Civic Engagement (PACE):
 - Role: Researcher.
 - Funding entity: Spanish Ministry of Economics Affairs and Digital Transformation.

Awards and Scholarships

Awards

2022 Ph.D. Outstanding Thesis Award, Awarded by University Carlos III of Madrid.

Special mention, Accessit Jesús Lores for an outstanding research paper "Exploring interaction mechanisms for map interfaces in virtual reality environments".

Scholarships

Mobility Grant for Young Researchers, Given by University Carlos III of Madrid to undertake the research visit to the Embodied Visualisation Lab at Monash University.

2017 Scholarship, Given by University Carlos III of Madrid to pursue the Ph.D.

2016 Scholarship, Given by Fundación Carolina to outstanding Ibero-American students to pursue M.Sc.

Teaching and Supervision Experience

Master Courses Teaching Experience

2017 - 2018

- University Carlos III of Madrid, School of Engineering, Madrid Spain
 - Interactive Product Design and Evaluation (Lab.) Spanish: Spring 2018.

Bachelor Courses Teaching Experience

2018 - present

- University Carlos III of Madrid, School of Engineering, Madrid Spain
 - Web Developing Techniques (Theory & Lab.) Spanish: Fall 2023.
 - User Interfaces (Theory & Lab.) Spanish: Fall 2022, Fall 2023.
 - Programming (Lab.) English: Fall 2018, Fall 2019. Spanish: Fall 2019, Fall 2020, Fall 2021, Fall 2022.
 - Interactive Systems Design (Lab.) Spanish: Spring 2018, Spring 2019.
 - Advanced knowledge of spreadsheets(Theory & Lab.) English: Spring 2021.

Technical Courses Teaching Experience

2014 - 2016

- Escuela Politécnica Nacional, Escuela de Formación de Tecnologos, Ouito - Ecuador
 - Network Security (Theory & Lab.) Fall 2015, Spring 2016 (Spanish)
 - Wireless Local Area Network (Theory & Lab.) Fall 2015, Spring 2016 (Spanish)
 - Introduction to Calculus (Theory) Fall 2015, Spring 2016 (Spanish)

Ph.D. Students Supervision

2023 - 2026

Amal Al Shardy (External co-supervisor) Monash University. *Research topic*: Leveraging Immersive Technology to Enhance and Foster Stronger Association with Net Zero Transition Initiatives and Projects in the Australian Context (Ongoing).

Bachelor Students Supervision

2023 - 2024

Igancio Frutos Monedero (Main supervisor) Universidad Carlos III de Madrid. *Bachelor Thesis*: Design and development of a data-driven storytelling experience using immersive technologies to raise awareness of traffic safety among citizens (ongoing).

2022 - 2023

- Carlos Fernandez Carchenilla (Main supervisor) Universidad Carlos III de Madrid. Bachelor Thesis: Design and development of an immersive VR visualization of the heart rate in real-time using IoT sensors (finished).
- Diego Muñoz del Val (Main Supervisor) Universidad Carlos III de Madrid. Bachelor Thesis: Design and development of an immersive collaborative bulleting board using augmented reality (finished).

2021 - 2022

Daniel Anton Blazquez (Main Supervisor) Universidad Carlos III de Madrid. Design and Development of a distributed system to manage environmental conditions of medical batches using LoRaWAN technologies and web services (finished).

Service

University service

February 2021 – present

Elected Member of the School of Engineering Board: The School Board is the collegiate body of administration of the Faculties or School. I was elected as a representative for assistant doctors, assistants and research fellows, which will constitute 10 percent of the Board.

January 2020 – September 2022

■ Elected Member of The Department of Computer Science Council (now ex officio member): The Department Council is the collegiate administrative body of the Department. I was elected as a representation assistants, research fellows, and predoctoral fellows who will constitute 15 percent of the Council.

October 2021 – present

Avanza Program Teacher Tutor: The Avanza Program aims to provide additional support to students whose academic results after the first semester have not been satisfactory. With this program, the students can improve this situation in the extraordinary call. It is also aimed at students who are in a higher year and run the risk of forced abandonment of the bachelor's program due to non-compliance with the permanence criteria.

Conference organize committee service

2024 ACM WomENcourage: Local Organizing Committee.

Journal paper reviewer

2023 **Springer:** Universal Access in the Information Society.

Springer: Virtual Reality Journal.

2020 **Plos:** One.

Conference paper reviewer

INTERACT: International Conference of the IFIP Technical Committee 13 on Human-Computer Interaction (INTERACT).

2022 **IEEE VR:** Virtual Reality Conference.

Talks and Presentations

Presentations at international conferences

Paper presentation at XIX International Conference on Human Computer Interaction Interacción Palma de Mallorca, Spain

Paper title: Exploring interaction mechanisms for map interfaces in virtual reality environments.

Talks and Presentations (continued)

Poster presentation at ISS ACM International Conference on Interactive Surfaces and Spaces, Brighton UK.

Poster title: A comparative study of menus in virtual reality environments.

Invited speaker

2023 Monash University, Embodied Visualisation Lab., Melbourne, Australia

- *Talk:* "The Effect of interaction and visual representation of collaborative maps for immersive virtual environments".

2020 Universidad Politécnica Nacional, Andean Wireless Communications & Applications Workshop, Quito, Ecuador

- Workshop: "Introduction to WebVR Development".

Dissemination events

2019 - present

- Madrid Week of Science and Innovation Madrid, Spain
 - *Workshop:* "Everyone can create their own Virtual Reality and it's at your mobile phone fingertips" (2019)
 - Workshop: "Create your own Virtual Reality: an introduction to the design and construction of virtual scenarios" (2020).
 - Workshop: "Listen and move with the sounds of your body: sound technology to promote physical activity" (2020) (Facilitator).
 - Workshop: "Let's talk about human values in mixed reality futures!" (2023) (Facilitator).

Skills

Coding Java, PHP, Python, R, C, C++, C#, LATEX, ...

Databases Mysql, Postgresql, Hsql, sqlite.

Web Dev HTML, css, JavaScript.

Misc. Academic research, teaching, training, Unity Development Engine, LaTeX typesetting and publishing.

Training

Research Training

Personal data managment for research activities. University Carlos III of Madrid. 4 hours.

2018 Advanced use of SCOPUS. Fundación Española para La Ciencia y Tecnología (FECYT). 3 hours.

- Tools and Strategies for the deployment and monitoring of the researcher's digital reputation. University Carlos III of Madrid. 5 hours.
- How to write and publish your papers in high-impact journals. The Charles-worth group. 2 hours.

Teaching Training

Academic teaching excellence: English as a Medium of Instruction (EMI). University Carlos III of Madrid. 10 hours.

Teaching and learning. University Carlos III of Madrid. 10 hours.

Training (continued)

- 2018 Introduction to teaching. University Carlos III of Madrid. 3 hours.
 - How to design and plan a MOOC/SPOC course. University Carlos III of Madrid. 3 hours.

Soft Skills Training

- Talk in front of a camera. University Carlos III of Madrid. 6 hours.
- 2018 Multimedia production: scripting and pre-production of videos. University Carlos III of Madrid. 4 hours.

Certifications

Proeficiency in English. LanguageCert Level 3 Certificate in ESOL international (Speaking Listening, Reading, Writing)(Mastery C2).