

# ZUBIN DATTA CHOUDHARY

*Curriculum Vitae—February 23, 2026*

---

## PERSONAL INFORMATION

Name: Zubin Datta Choudhary  
Born: January 4, 1997  
Nationality: Indian  
Languages: English, Hindi, Bengali

---

## CONTACT INFORMATION

Address: Orlando, FL 32828  
United States  
E-Mail: [zubin.choudhary@ucf.edu](mailto:zubin.choudhary@ucf.edu)  
Google Scholar: link  
LinkedIn: <https://www.linkedin.com/in/zubin-choudhary/>

---

## PROFESSIONAL POSITIONS AND AFFILIATIONS

- 01/2025–present ***Visiting Researcher***  
Seamless Team, Inria, Rennes, France, awarded *Chateaubriand Fellowship* by the Embassy of France
- 08/2019–02/2024 ***Graduate Research Assistant***  
Synthetic Reality Lab (SREAL), Institute for Simulation and Training, *University of Central Florida*, United States
- 02/2024–06/2024 ***Graduate Teaching Assistant – Grader***  
COP 3330 - Object-Oriented Programming
- 05/2022–08/2022 ***Research Scientist Intern***  
Meta Reality Labs, Sausalito, United States
- 11/2017–03/2019 ***Student Brand Ambassador of Unity Technologies***  
Greater India Region

## ACADEMIC STUDIES AND DEGREES

- 08/2019–present PhD in Computer Science; University of Central Florida, United States
- 04/2015–03/2019 Bachelor of Technology degree in Computer Science and Engineering; SRM Institute of Science and Technology, Kattankulathur, Chennai, India
- 

## RESEARCH INTERESTS

- Virtual Reality (VR) & Virtual Environments (VEs)
  - Augmented Reality (AR) & Mixed Reality (MR), such as CAVES
  - Human-Computer Interaction (HCI)
  - Visual and Speech Perception
  - Human Cognition
  - Virtual Humans and Embodiment
  - Communication with Virtual Humans
  - Trust and Decision Making
- 

## AWARDS AND HONORS

- 06/2024 **2024-2025 STEM Chateaubriand Fellow** by the Embassy of France to be a visiting researcher for 6 months at the Seamless Team in Inria, Rennes, France under the supervision of Dr. Ferran Argelaguet.
- 10/2023 **UCF Graduate Presentation Fellowship** for presenting "Visual Facial Enhancements can Significantly Improve Speech Perception in the Presence of Noise" at IEEE International Symposium on Mixed and Augmented Reality (ISMAR) in Sydney, Australia, 2023.
- 11/2021 **Best Poster/Demo Award** for "Real-Time Magnification in Augmented Reality" at the ACM Conference on Spatial User Interfaces (SUI) 2021.
- 10/2021 **2021 Innovation Award** for "Intelligent Object Magnification for Augmented Reality Displays" at TechConnect World Innovation Conference and Expo 2021, Washington (DC), USA.
- 07/2017 **1st Place** at Smart India Hackathon, Kochi, India, 2017 for "ARtifacts: museum guide with mobile AR and VR".

---

## PROFESSIONAL SERVICE

- **Conference Reviewer**

1. IEEE Virtual Reality and 3D User Interfaces (VR) 2022, 2023, 2024
2. ACM Conference on Human Factors in Computing Systems (CHI) 2024
3. IEEE International Symposium on Mixed and Augmented Reality (ISMAR) 2022, 2023
4. ACM Conference on Human Factors in Computing Systems Late-Breaking Work (CHI-LBW) 2022, 2023
5. Behaviour & Information Technology Journal 2023
6. ACM Conference on Human Factors in Computing Systems (CHI) 2022
7. ACM Conference on Spatial User Interaction (SUI) 2021
8. ACM Symposium on Virtual Reality Software and Technology (VRST) 2021

- **Presentations**

1. IEEE International Symposium on Mixed and Augmented Reality (ISMAR), "Visual Facial Enhancements can Significantly Improve Speech Perception in the Presence of Noise", Zubin Choudhary, Sydney, Australia, 2023
2. IEEE Conference on Virtual Reality and 3D User Interfaces (VR), "Exploring the Social Influence of Virtual Humans Unintentionally Conveying Conflicting Emotions", Zubin Choudhary, Virtual, 2023
3. ACM Conference on Spatial User Interfaces (SUI), "Real-Time Magnification in Augmented Reality", Zubin Choudhary, Virtual, 2021
4. IEEE International Symposium on Mixed and Augmented Reality (ISMAR), "Amplifying realities: Gradual and Seamless Scaling of Visual and Auditory Stimuli in Extended Reality", Zubin Choudhary, Virtual, 2021
5. Workshop on User-Embodied Interaction in Virtual Reality (UIVR), "Scaled User Embodied Representations in Virtual and Augmented Reality", Zubin Choudhary, 2021
6. IEEE Conference on Virtual Reality and 3D User Interfaces (VR), "Revisiting Distance Perception with Scaled Embodied Cues in Social Virtual Reality", Zubin Choudhary, Virtual, 2021
7. IEEE Conference on Virtual Reality and 3D User Interfaces (VR), "Virtual Big Heads: Analysis of Human Perception and Comfort of Head Scales in Social Virtual Reality", Zubin Choudhary, Virtual, 2020

- **Other Professional Activities**

1. Guest Lecture and Tutorial for CAP 5118 Fundamentals of VR.
2. Organizer of the Workshop on Inclusion, Diversity, Equity, Accessibility, Transparency and Ethics in XR (IDEATExR) at IEEE Conference on Virtual Reality and 3D User Interfaces (VR) 2025
3. Student Volunteer at IEEE Conference on Virtual Reality and 3D User Interfaces (VR) 2020, 2024, 2025
4. Student Volunteer at IEEE International Symposium on Mixed and Augmented Reality (ISMAR) 2021
5. Local Arrangements Chair at ICAT-EGVE 2020 Conference, Orlando
6. Part of the winning team at the Smart India Hackathon in 2017 which was managed by the Ministry of Tourism, India

---

## PATENTS

### • Patents

1. Gerd Bruder, Gregory Welch, and **Zubin Choudhary**. United States Pending Patent: "*Enhanced Communication by Generative Audiovisual Cues*"
2. Gerd Bruder, Gregory Welch, Kangsoo Kim, and **Zubin Choudhary**. United States Patent (# US 17/853,072): "*Spatial Positioning of Targeted Object Magnification*"
3. Gerd Bruder, Gregory Welch, Kangsoo Kim, and **Zubin Choudhary**. United States Patent (# US 17/330,679): "*Intelligent Object Magnification for Augmented Reality Displays*"

## SELECTED PUBLICATIONS

(ordered by year; descending order)

---

### PEER-REVIEWED PROCEEDINGS

2025

- [1] Gerd Bruder, Ryan Schubert, Michael P Browne, Austin Erickson, Zubin Choudhary, Matt Gottsacker, Hiroshi Furuya, and Gregory Welch. Exploring how augmented reality display features affect training system performance. In *International Conference on Human-Computer Interaction*, pages 79–95. Springer, 2025.
- [2] Hiroshi Furuya, Jasmine Joyce DeGuzman, Zubin Choudhary, Matt Gottsacker, Gerd Bruder, and Gregory F Welch. How does presence affect trust in simulated autonomous agents? In *2025 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, pages 502–503. IEEE, 2025.
- [3] Zubin Choudhary, Ferran Argelaguet, Gerd Bruder, and Greg Welch. Inducing unintentional positional drift (upd) in virtual reality via physical rotations and the illusion of leaning. In *2025 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, pages 1198–1199. IEEE, 2025.
- [4] Laura Battistel, Zubin Choudhary, Gerd Bruder, Gregory Welch, Massimiliano Zampini, Riccardo Parin, et al. Chill or warmth: Where will you stand closer to me? In *IMRF*. 2025.

---

2024

- [1] Gerd Bruder, Michael Browne, Zubin Choudhary, Austin Erickson, Hiroshi Furuya, Matt Gottsacker, Ryan Schubert, and Gregory Welch. Visual factors influencing trust and reliance with augmented reality systems. *Journal of Vision Abstracts—Vision Sciences Society (VSS) Annual Meeting*, 2024.
- [2] Hiroshi Furuya, Zubin Choudhary, Jasmine Joyce DeGuzman, Matt Gottsacker, Gerd Bruder, and Greg Welch. Using simulated real-world terrain in vr to study outdoor ar topographic map interfaces. In *Proceedings of the International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments (ICAT-EGVE 2024), Tsukuba, Japan, December 1-3, 2024*, pages 1–10, 2024.
- [3] Hiroshi Furuya, Laura Battistel, Zubin Datta Choudhary, Matt Gottsacker, Gerd Bruder, and Gregory F Welch. Difficulties in perceiving and understanding robot reliability changes in a sequential binary task. In *Proceedings of the 2024 ACM Symposium on Spatial User Interaction, SUI '24*, pages 1–11, Trier, Germany, 2024. Association for Computing Machinery.

- 
- [4] Matt Gottsacker, Hiroshi Furuya, Zubin Choudhary, Austin Erickson, Ryan Schubert, Gerd Bruder, Michael P. Browne, and Gregory F. Welch. Investigating the relationships between user behaviors and tracking factors on task performance and trust in augmented reality. *Elsevier Computers Graphics*, 123:1–14, 2024.
  - [5] Zubin Choudhary, Laura Battistel, Raiffa Syamil, Hiroshi Furuya, Ferran Argelaguet, Gerd Bruder, and Gregory F. Welch. Examining the effects of teleportation on semantic memory of a virtual museum compared to natural walking. In *Proceedings of the International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments (ICAT-EGVE 2024), Tsukuba, Japan, December 1-3, 2024*, pages 1–12, 2024.

---

2023

- [1] Zubin Choudhary, Gerd Bruder, and Greg Welch. Visual facial enhancements can significantly improve speech perception in the presence of noise. *IEEE Transactions on Visualization and Computer Graphics*, 2023.
- [2] Zubin Choudhary, Gerd Bruder, and Greg Welch. Visual hearing aids: Artificial visual speech stimuli for audiovisual speech perception in noise. In *Proceedings of the 29th ACM Symposium on Virtual Reality Software and Technology*, pages 1–10, 2023.
- [3] Zubin Choudhary, Nahal Norouzi, Austin Erickson, Ryan Schubert, Gerd Bruder, and Greg Welch. Exploring the social influence of virtual humans unintentionally conveying conflicting emotions. In *Proceedings of the 30th IEEE Conference on Virtual Reality and 3D User Interfaces, IEEE VR 2023*, 2023.

---

2022

- [1] Zubin Choudhary, Austin Erickson, Nahal Norouzi, Kangsoo Kim, Gerd Bruder, and Greg Welch. Virtual big heads in extended reality: Estimation of ideal head scales and perceptual thresholds for comfort and facial cues. *ACM Transactions on Applied Perception*, 2022.
- [2] Tiffany D Do, Mamtaj Akter, Zubin Choudhary, Roger Azevedo, and Ryan P McMahan. The effects of an embodied pedagogical agent’s synthetic speech accent on learning outcomes. In *Proceedings of the 2022 International Conference on Multimodal Interaction*, pages 198–206, 2022.

---

2021

- [1] Zubin Choudhary, Jesus Ugarte, Gerd Bruder, and Greg Welch. Real-time magnification in augmented reality. In *Proceedings of the 2021 ACM Spatial User Interaction, SUI 2021*, pages 1–2. ACM, 2021.

- [2] Connor D Flick, Courtney J Harris, Nikolas T Yonkers, Nahal Norouzi, Austin Erickson, Zubin Choudhary, Matt Gottsacker, Gerd Bruder, and Greg Welch. Trade-offs in augmented reality user interfaces for controlling a smart environment. In *In Symposium on Spatial User Interaction (SUI '21)*, pages 1–11, New York, NY, USA, 2021. Association for Computing Machinery.
- [3] Zubin Choudhary. Amplifying realities: Gradual and seamless scaling of visual and auditory stimuli in extended reality. In *International Symposium on Mixed and Augmented Reality (ISMAR) 2021*, page 4. IEEE, 2021.
- [4] Zubin Choudhary, Gerd Bruder, and Greg Welch. Scaled user embodied representations in virtual and augmented reality. In *Workshop on User-Embodied Interaction in Virtual Reality (UIVR) 2021*, 2021.
- [5] Zubin Choudhary, Matt Gottsacker, Kangsoo Kim, Ryan Schubert, Jeanine Stefanucci, Gerd Bruder, and Greg Welch. Revisiting distance perception with scaled embodied cues in social virtual reality. In *2021 IEEE Virtual Reality and 3D User Interfaces (VR)*, pages 788–797. IEEE, 2021.

## 2020

- [1] Nahal Narouzi, Kangsoo Kim, Gerd Bruder, Austin Erickson, Zubin Choudhary, Yifan Li, and Greg Welch. A systematic literature review of embodied augmented reality agents in head-mounted display environments. In *ICAT-EGVE*, pages 101–111, 2020.
- [2] Zubin Choudhary, Kangsoo Kim, Ryan Schubert, Gerd Bruder, and Greg Welch. Virtual big heads: Analysis of human perception and comfort of head scales in social virtual reality. In *Proceedings of the IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR)*, pages 425–433, Atlanta, Georgia, 2020.

**LIST OF Co-AUTHORS**

(ordered by position, affiliation, and last name; affiliations match those of last co-authorship; the number in brackets indicates the co-authored publications)

- **Co-Authors**

- University of Central Florida
  - \* Greg Welch, PhD (10)
  - \* Gerd Bruder, PhD (10)
  - \* Ryan Schubert (3)
  - \* Nahal Narouzi, PhD (1)
  - \* Austin Erickson, PhD (4)

- \* Matt Gottsacker (**2**)
  - \* Yifan Li (**1**)
  - \* Nikolas T Yonkers (**1**)
  - \* Connor D Flick (**1**)
  - \* Courtney J Harris (**1**)
  - \* Jesus Ugarte (**1**)
  - \* Tiffany D Do (**1**)
  - \* Roger Azevedo, PhD (**1**)
  - \* Ryan P McMahan, PhD (**1**)
  - \* Mamtaj Akter (**1**)
- University of Calgary
- \* Kangsoo Kim, PhD (**4**)
- University of Utah
- \* Jeanine Stefanucci, PhD (**1**)



Zubin Choudhary  
Orlando, February 23, 2026