Eric J. Gonzalez

Research Interests: Human-Computer Interaction (HCI),
Extended Reality (XR), AI-mediated Experiences (XR+AI)

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Experience

2022–now **Google** — Seattle, WA
Senior Research Scientist | Human-AI Interface Team, Android XR

2021 **Meta Reality Labs** — Redmond, WA
Research Intern | Haptic Displays

2020 **Microsoft Research** — Redmond, WA
Research Intern | EPIC Group

Education

2018–2022 **Stanford University** — Stanford, CA
Ph.D., Mechanical Engineering | Focus in HCI

2016–2018 **Stanford University** — Stanford, CA
M.S., Mechanical Engineering | Depth in Mechatronics

2012–2016 **University of Florida** — Gainesville, FL
B.S., Mechanical Engineering | Minor in Mathematics

Awards & Honors

2025 ACM SIGCHI Special Recognition for Industry-Academia Collaboration
2025 SXSW Innovation Awards Finalist, XR-Objects
2023 Best Paper Award, ACM CHI
2021 Best Paper Honorable Mention, ACM UIST
2020 Stanford DARE Fellowship
2019 Best Paper Award, ACM VRST
2016 Stanford University Graduate Fellowship
2016 UF Outstanding Senior Award
2015 NSF REU Fellowship
2011 National Hispanic Scholar

Peer-Reviewed Conference and Journal Publications

Up-to-date list available at: `https://scholar.google.com/citations?hl=en&user=8lcDw-kAAAAJ`

Citations	994 (h-index 16)	**Abstracts**	7 Posters, 3 Demos
Conference	16 Papers **[3 Awards]**	**Workshops**	7 Papers, 1 Organized
Journal	5 Papers	**Patents**	2 Awarded, 9 pending

Conference

[C16] W. Huang, S. Pei, L. Zou, **E.J. Gonzalez**, I. Chatterjee, and Y. Zhang. *DeltaDorsal: Enhancing Hand Pose Estimation with Dorsal Features in Egocentric Views*. **CHI 2026**.

[C15] V. Xu, B. Chen, **E.J. Gonzalez**, A. Colaço, H. Hoffmann, M. Gonzalez-Franco, and K. Ahuja. *SurfaceXR: Fusing Smartwatch IMUs and Egocentric Hand Pose for Seamless Surface Interactions*. **IEEE VR 2026**.

[C14] E.K. Tütüncü, M. Gonzalez-Franco, and **E.J. Gonzalez**. *HandOver: Enabling Precise Selection & Manipulation of 3D Objects with Mouse and Hand Tracking*. **UIST 2025**.

[C13] C. Zhang, T.S. Ma, J. Andrews, **E.J. Gonzalez**, M. Gonzalez-Franco, and Y. Yang. *ForcePinch: Force-Responsive Spatial Interaction for Tracking Speed Control in XR*. **UIST 2025**.

[C12] H. Mao, M. Gonzalez-Franco, V. Phadnis, **E.J. Gonzalez**, and I. Chatterjee. *RestfulRaycast: Exploring Ergonomic Rigging and Joint Amplification for Precise Hand Ray Selection in XR*. **DIS 2025**.

[C11] B.J. Hou, L. Abramyan, P. Gurumurthy, H. Adams, I. Tosic Rodgers, **E.J. Gonzalez**, K. Patel, A. Colaço, K. Pfeuffer, and H. Gellersen. *Online-EYE: Multimodal Implicit Eye Tracking Calibration for XR*. **CHI 2025**.

[C10] F. Zhu, X. Qian, D. Kalmar, M. Tayarani, **E.J. Gonzalez**, M. Gonzalez-Franco, et al. *Beyond the Phone: Exploring Phone-XR Integration through Multi-View Transitions for Real-World Applications*. **IEEE VR 2025**.

[C9] R. Bovo, S. Abreu, K. Ahuja, **E.J. Gonzalez**, L.-T. Cheng, and M. Gonzalez-Franco. *EmBARDiment: an Embodied AI Agent for Productivity in XR*. **IEEE VR 2025**.

[C8] M.D. Dogan, **E.J. Gonzalez**, K. Ahuja, R. Du, A. Colaço, J. Lee, M. Gonzalez-Franco, and D. Kim. *Augmented Object Intelligence with* XR-OBJECTS. **UIST 2024**.

[C7] M.N. Lystbæk, T. Mikkelsen, R. Krisztandl, **E.J. Gonzalez**, M. Gonzalez-Franco, H. Gellersen, and K. Pfeuffer. *Hands-on, Hands-off: Gaze-Assisted Bimanual 3D Interaction*. **UIST 2024**.

[C6] **E.J. Gonzalez** and S. Follmer. *Sensorimotor Simulation of Redirected Reaching Using Stochastic Optimal Feedback Control*. **CHI 2023**. **[Best Paper]**

[C5] **E.J. Gonzalez**, E.D.Z. Chase, P. Kotipalli, and S. Follmer. *A Model Predictive Control Approach for Reach Redirection in Virtual Reality*. **CHI 2022**.

[C4] **E.J. Gonzalez**, E. Ofek, M. Gonzalez-Franco, and M. Sinclair. *X-Rings: A Hand-mounted 360 Degree Shape Display for Grasping in Virtual Reality*. **UIST 2021**. **[Honorable Mention]**

[C3] **E.J. Gonzalez**, P. Abtahi, and S. Follmer. *REACH+: Extending the Reachability of Encountered-type Haptics Devices through Dynamic Redirection in VR*. **UIST 2020**.

[C2] **E.J. Gonzalez** and S. Follmer. *Investigating the Detection of Bimanual Haptic Retargeting in Virtual Reality*. **VRST 2019**. **[Best Paper]**

[C1] A.F. Siu, **E.J. Gonzalez**, S. Yuan, J.B. Ginsberg, and S. Follmer. *shapeShift: 2D Spatial Manipulation and Self-actuation of Tabletop Shape Displays for Tangible and Haptic Interaction*. **CHI 2018**.

Journal

[J5] I. Choi, **E.J. Gonzalez**, and S. Follmer. *Hybrid Actuation with Unidirectional Clutches for Handheld Haptic Controllers*. **IEEE RAL 2021**.

[J4] I. Choi, Y. Zhao, **E.J. Gonzalez**, and S. Follmer. *Augmenting Perceived Softness of Haptic Proxy Objects Through Transient Vibration and Visuo-Haptic Illusion in Virtual Reality*. **IEEE TVCG 2020**.

[J3] K. Zhang, **E.J. Gonzalez**, J. Guo, and S. Follmer. *Design and Analysis of High-Resolution Electrostatic Adhesive Brakes Towards Static Refreshable 2.5 D Tactile Shape Display*. **IEEE Trans. Haptics 2019**.

[J2] **E.J. Gonzalez**, R.J. Downey, C.A. Rouse, and W.E. Dixon. *Influence of Elbow Flexion and Stimulation Site on Neuromuscular Electrical Stimulation of the Biceps Brachii*. **IEEE TNSRE 2018**.

[J1] R.J. Downey, M. Merad, **E.J. Gonzalez**, and W.E. Dixon. *The Time-Varying Nature of Electromechanical Delay and Muscle Control Effectiveness in Response to Stimulation-Induced Fatigue*. **IEEE TNSRE 2016**.

Peer-Reviewed or Juried Short Papers and Demos

[S17] E.K. Tütünücü, M. Gonzalez-Franco, K. Patel, and **E.J. Gonzalez**. *World Mouse: Exploring Interactions with a Cross-Reality Cursor*. **CHI Workshops 2026**.

[S16] J. Collins, P. Gurumurthy, **E.J. Gonzalez**, and M. Gonzalez-Franco. *Sticky and Magnetic: Evaluating Error Correction and User Adaptation in Gaze and Pinch Interaction*. **CHI LBW 2026**.

[S15] M.N. Lystbæk, H. Adams, R.K. Ananda, **E.J. Gonzalez**, L. Ballan, Q. Wu, A. Colaço, P. Tan, and M. Gonzalez-Franco. *Navig-AI-tion: Navigation by Contextual AI and Spatial Audio*. **CHI LBW 2026**.

[S14] C. Zhang, T. Wei, H. Yang, M. Gonzalez-Franco, Y. Yang, and **E.J. Gonzalez**. *Break the Window: Exploring Spatial Decomposition of Webpages in XR*. **CHI LBW 2026**.

[S13] R. Suzuki, P. Abtahi, C. Zhu-Tian, M.D. Dogan, A. Colaço, **E.J. Gonzalez**, K. Ahuja, and M. Gonzalez-Franco. *Programmable Reality*. **Frontiers in Virtual Reality 2025**.

[S12] **E.J. Gonzalez**. *Practical Input Considerations for Wearable AI Assistants in XR*. **CHI Workshops 2025**.

[S11] K. Patel, V. Phadnis, **E.J. Gonzalez**, H. Gellersen, K. Pfeuffer, and M. Gonzalez-Franco. *H2E: Hand, Head, Eye: A Multimodal Cascade of Natural Inputs*. **IEEE VR Workshops 2025**.

[S10] S. Abreu, T.D. Do, K. Ahuja, **E.J. Gonzalez**, L. Payne, D. McDuff, and M. Gonzalez-Franco. *PARSE-Ego4D: Personal Action Recommendation Suggestions for Egocentric Videos*. **ICLR Workshops 2025**.

[S9] R. Bovo, D. Giunchi, P. Cascarano, **E.J. Gonzalez**, and M. Gonzalez-Franco. *Revisiting Put-That-There: Context Aware Window Interactions via LLMs*. **ISMAR Workshops 2025**.

[S8] M. Gonzalez-Franco, D. Abdlkarim, A. Bhatia, S. Macgregor, J.A. Fotso-Puepi, **E.J. Gonzalez**, H. Seifi, M. Di Luca, and K. Ahuja. *Hovering Over the Key to Text Input in XR*. **IEEE ISEMV 2024**.

[S7] **E.J. Gonzalez**, I. Chatterjee, M. Gonzalez-Franco, A. Colaço, and K. Ahuja. *Intent-Driven Input Device Arbitration for XR*. **CHI LBW 2024**.

[S6] **E.J. Gonzalez**, K. Patel, K. Ahuja, and M. Gonzalez-Franco. *XDTK: A Cross-device Toolkit for Input & Interaction in XR*. **IEEE VR Workshops 2024**.

[S5] A. Kitson, S.J. Ahn, **E.J. Gonzalez**, P. Panda, K. Isbister, and M. Gonzalez-Franco. *Virtual Games, Real Interactions: A Look at Cross-reality Asymmetrical Co-located Social Games*. **CHI LBW 2024**.

[S4] R. Bovo, **E.J. Gonzalez**, L.-T. Cheng, and M. Gonzalez-Franco. *WindowMirror: An Opensource Toolkit to Bring Interactive Multi-Window Views into XR*. **IEEE VR Workshops 2024**.

[S3] E.D.Z. Chase, A.F. Siu, A. Boadi-Agyemang, G.S.H. Kim, **E.J. Gonzalez**, and S. Follmer. *PantoGuide: A Haptic and Audio Guidance System to Support Tactile Graphics Exploration*. **ASSETS Posters 2020**.

[S2] **E.J. Gonzalez**, P. Abtahi, and S. Follmer. *Evaluating the Minimum Jerk Motion Model for Redirected Reach in Virtual Reality*. **UIST Posters 2019**.

[S1] A.F. Siu, **E.J. Gonzalez**, S.Y. Yuan, J.B. Ginsburg, A.R. Zhao, and S. Follmer. *shapeShift: a Mobile Tabletop Shape Display for Tangible and Haptic Interaction*. **UIST Demos 2017**. **[Best Demo Honorable Mention]**

Book Chapters

[B2] A.F. Siu, E.D.Z. Chase, S.H.G. Kim, A. Boadi-Agyemang, **E.J. Gonzalez**, and S. Follmer. *Haptic Guidance to Support Design Education and Collaboration for Blind and Visually Impaired People*. In *Design Thinking Research*, pp. 167-180, Springer. 2021.

[B1] A.F. Siu, S.Y. Yuan, H. Pham, **E.J. Gonzalez**, L.H. Kim, M. Le Goc, and S. Follmer. *Investigating Tangible Collaboration for Design Towards Augmented Physical Telepresence*. In *Design Thinking Research*, pp. 131-145, Springer. 2018.

Patents

[P2] **E.J. Gonzalez**, A.H. Memar, and N. Colonnese. "Estimation or control of contact force in actuators using pressure." U.S. Patent No. 12,353,625, issued 8 Jul. 2025.

[P1] M. Gonzalez-Franco, M.J. Sinclair, E. Ofek, and **E.J. Gonzalez**. "Multilayer controller." U.S. Patent 11,822,712, issued 21 Nov. 2023.

Professional Activities

Program Committee

ACM UIST 2026, 2023
ACM CHI 2025

External Reviewing

ACM CHI, ACM UIST, SIGGRAPH, ACM IMWUT, ACM DIS, IEEE ISMAR, IEEE VR, IEEE World Haptics, IJHCS

Workshop Organizing

IEEE VR 2024 - *Open Access Tools and Libraries for Virtual Reality*

Invited Talks

2025 Princeton HCI Seminar, *hosted by Parastoo Abtahi*
2025 Forum on Future Interaction: Reimagining Human-AI Relationships, *hosted by Shengdong Zhao*
2024 NII Shonan Meeting on Augmented Multimodal Interaction, *hosted by Matthew Brehmer*
2022 Meta Reality Labs Research, *hosted by Amirhossein Memar*
2022 Microsoft Research, *hosted by Andy Wilson*

Events

2026 MiamiXR, *invited panelist*
2025 ACM UIST Demos, *jury*
2025 KAIST Pre-UIST Workshop, *invited panelist*
2025 NAE Grainger Foundation Frontiers of Engineering Symposium, *invited participant*
2024 ACM UIST Posters, *jury*
2023 Dagstuhl Seminar on Social XR, *invited participant*

Teaching

Course Assistant

Spring 2020 **ME 216M: Introduction to the Design of Smart Products** (Graduate)
Instructor: Sean Follmer
Department of Mechanical Engineering, Stanford University

Spring 2019 **ME 216M: Introduction to the Design of Smart Products** (Graduate)
Instructor: Sean Follmer
Department of Mechanical Engineering, Stanford University

Student Mentorship

2026 Jina Kim *(KAIST)*

2025 Nels Numan *(University College London)*
Xiaoan Liu *(CU Boulder)*
Mathias Lystbaek *(Aarhus University)*
Chenyang Zhang *(Georgia Tech)*
Jazmin Collins *(Cornell Tech)*

2024 Vasco Xu *(Northwestern University)*
Esen K. Tütüncü *(University of Barcelona)*
Baosheng James Hou *(Lancaster University)*
Riccardo Bovo *(Imperial College London)*
Hongyu Mao *(University of Washington)*

2023 Mustafa Doğa Dogan *(MIT)*
Jason Fotso-Puepi *(Purdue University)*

Selected Press Coverage

CNET, 12 Dec 2024. *I Tried Google and Samsung's Next-Gen Android XR Headsets and Glasses, and the Killer App Is AI*.

Nature Portfolio, 11 Oct 2021. *Building the Next Generation of Shape Displays*.

Wall Street Journal, 25 Apr 2018. *Volkswagen Brings Sense of Touch to Virtual Reality*.

Gizmodo, 27 Apr 2018. *This Shape-Shifting, Pin-Headed Robot Lets You Feel Virtual Objects With Your Bare Hands*.

Fast Company, 30 Apr 2018. *A Computer Mouse For The Year 3000*.

Last updated: **April 2026**