

# Jay Henderson Curriculum Vitae

Pronouns: he/they

Nationality: Canadian

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## Current Position

Postdoctoral Fellow & Instructor

*School of Information Technology, Carleton University*

## Overview

My research interests span a variety of domains within human-computer interaction, including, learning input techniques, augmented/mixed/virtual reality, and 2D/3D interaction – with the overarching goal of understanding human behaviour while interacting with emerging technology. My fundamental computer science background paired with interdisciplinary training in psychology and mathematics has placed me in a unique position to make meaningful contributions to the field; evident through my numerous publications at top-tier venues.

## Education

- 2021      PhD in Computer Science  
Thesis: Understanding Mode and Modality Transfer in Unistroke Gesture Input  
*University of Waterloo*
- 2016      BSc Hons in Computer Science (minors in Mathematics and Psychology)  
*Mount Allison University*

## Professional Experience

- 2022 -      Postdoctoral Fellow & Instructor  
*Carleton University*
- 2021 - 2022      Senior Research Scientist  
*Huawei Technologies Canada*
- 2019 - 2020      Research Scientist Internship  
*Meta Reality Labs (formerly Chatham Labs)*

2018 - 2019 Research Scientist Internship  
Huawei Technologies Canada

2017 Visiting Researcher  
Inria, Lille

2016 Software Engineer  
Mysa Smart Thermostats

## Publications

\*\*\* **Note about venues:** in Human-Computer Interaction (HCI), conference proceedings are the preferred publication venues, being timelier and having the greatest impact (typical for experimental computer science). Top tier conferences require rigorous multi-stage review of manuscripts for archival proceedings. CHI (ACM's Conference on Human Factors in Computing Systems) and IMWUT (The Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies) are ranked #1 and #3, respectively, in HCI (via Google Scholar).

- 2023 **Jay Henderson**, Ali Neshati, Wei Zhou, Daniel Vogel, Edward Lank. 2023. *Interaction Region Characteristics for Midair Barehand Targeting on a Television*. Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems (CHI EA '23). DOI: [10.1145/3544549.3585877](https://doi.org/10.1145/3544549.3585877). (**Acceptance rate: 34%**)
- 2023 Arman Hafizi, **Jay Henderson**, Ali Neshati, Wei Zhou, Edward Lank, Daniel Vogel. 2023. *In-vehicle Performance and Distraction for Midair and Touch Directional Gestures*. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). DOI: [10.1145/3544548.3581335](https://doi.org/10.1145/3544548.3581335). (**Acceptance rate: 28.4%**)
- 2022 **Jay Henderson**, Tanya Jonker, Edward Lank, Daniel Wigdor, Ben Lafreniere. 2022. *Investigating Cross-Modal Approaches for Evaluating Error Acceptability of a Recognition-Based Input Technique*. In Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 6, 1 (March 2022), 22 pages. DOI: [10.1145/3517262](https://doi.org/10.1145/3517262). (**Average acceptance rate: 22.5%**)
- 2020 **Jay Henderson**, Jessy Ceha, and Edward Lank. 2020. *STAT: Subtle Typing Around the Thigh for Head-Mounted Displays*. In 22nd International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '20). Association for Computing Machinery, New York, NY, USA, Article 27, 1–11. DOI: [10.1145/3379503.3403549](https://doi.org/10.1145/3379503.3403549). (**Average acceptance rate: 23.1%**)

- 2020 **Jay Henderson**, Sylvain Malacria, Mathieu Nancel, and Edward Lank. 2020. *Investigating The Necessity Of Delay In Marking Menu Invocation*. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20), Apr 25–30, 2020, Honolulu, HI USA. Association for Computing Machinery, New York, NY, USA, 1–13.  
DOI: [10.1145/3313831.3376296](https://doi.org/10.1145/3313831.3376296). (**Acceptance rate: 24.3%**)
- 2019 **Jay Henderson**, Sachi Mizobuchi, Wei Li, and Edward Lank. 2019. *Exploring Cross-Modal Training via Touch to Learn a Mid-Air Marking Menu Gesture Set*. In Proceedings of the 21st International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '19). Association for Computing Machinery, New York, NY, USA, Article 8, 1–9.  
DOI: [10.1145/3338286.3340119](https://doi.org/10.1145/3338286.3340119). (**Average acceptance rate: 23.1%**)
- 2019 **Jay Henderson**, Jeff Avery, Laurent Grisoni, and Edward Lank. 2019. *Leveraging Distal Vibrotactile Feedback for Target Acquisition*. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), May 4–9, 2019, Glasgow, Scotland UK. ACM, New York, NY, USA 11 Pages.  
DOI: [10.1145/3290605.3300715](https://doi.org/10.1145/3290605.3300715). (**Acceptance rate: 23.8%**)
- 2019 **Jay Henderson**, Shaishav Siddhpuria, Keiko Katsuragawa, and Edward Lank. 2017. *Fostering large display engagement through playful interactions*. In Proceedings of the 6th ACM International Symposium on Pervasive Displays (PerDis '17). Association for Computing Machinery, New York, NY, USA, Article 20, 1–8.  
DOI: [10.1145/3078810.3078818](https://doi.org/10.1145/3078810.3078818). (**Acceptance rate: 55%**)

## Service

- 2021 - Program Committee (Associate Chair)  
ACM's DIS (Designing Interactive Systems)  
ACM's CHI Late Breaking Work  
ACM's MobileHCI Late Breaking Work
- 2018 - Peer Reviewer  
ACM's CHI  
ACM's MobileHCI  
ACM's AutoUI  
ACM's DIS (Designing Interactive Systems)  
ACM's ISS ( Interactive Surfaces and Spaces)  
ACM's ETRA (Eye Tracking Research & Applications)  
Elsevier's International Journal of Human Computer Studies (IJCHS)
- 2023 Co-Chair  
*IEEE VR*  
Workshop on Emerging Novel Prototyping Techniques for XR (ENPT XR)

- 2019 ACM Name Change Committee  
*Association for Computing Machinery*  
 As a transgender man, I was selected to serve on a committee that developed an overarching name change policy within all ACM publications.  
 (<https://www.acm.org/publications/policies/author-name-changes>)
- 2019 CHI Conference Allyship Program  
*ACM SIGCHI*  
 Served as a point of contact for attendees about equity. Selected for experience in equity-related activities, particularly, involvement in LGBTQ+ initiatives.
- 2017 CHI Conference Student Volunteer  
*ACM SIGCHI*
- 2014 - 2016 S.M.I.L.E. Buddy  
*Mount Allison University / Cumberland YMCA*  
 An accessibility oriented buddy program offered to children with disabilities, who may otherwise not be able to participate in typical programs due to their unique developmental needs. Occurred each Saturday morning of the academic year.

## Teaching

- 2023 ITEC 4011 – AI for Digital Media  
 Instructor & Course Developer  
*Carleton University*
- 2018 - 2020 CS 349 – Introduction to User Interfaces  
 Instructional Apprentice  
*University of Waterloo*
- 2017 - 2019 CS 105 – Introduction to Computer Programming 1  
 Instructional Apprentice  
*University of Waterloo*
- 2017 - 2018 CS 106 – Introduction to Computer Programming 2  
 Instructional Apprentice  
*University of Waterloo*
- 2019 CS 449/649 – Human-Computer Interaction  
 TA  
*University of Waterloo*
- 2016 CS 135 – Designing Functional Programs  
 TA  
*University of Waterloo*

- 2016 COMP 1731 – Programming Techniques and Algorithms  
TA  
*Mount Allison University*
- 2015 COMP 2931 – Introduction to Systems Programming  
TA  
Mount Allison University

## Awards

- 2017 - 2019 David R. Cheriton Graduate Scholarship  
Awarded by the director of the Cheriton School of Computer Science and an appointed committee based on academic excellence.  
Valued at \$10,000 annually (\$20,000/2 years).
- 2016 - 2021 Math Graduate Student Award  
Valued at \$6,000 annually (\$30,000/5 years).
- 2016 - 2021 Graduate Student Research Travel Assistantship  
Valued at \$500 for travel to various conferences.

## Supervision

- 2022 Arman Hafizi, University of Waterloo MMath Student  
*Huawei-Waterloo Joint Innovation Lab*
- 2022 Jeffrey Lee, Mechatronics Engineering Co-op Student  
*Human-Machine Interaction Lab, Huawei Technologies Canada*
- 2022 Rachel Xu, Mechatronics Engineering Co-op Student  
*Human-Machine Interaction Lab, Huawei Technologies Canada*

## Talks

- 2021 - 2022 Understanding Modality Transfer in Unistroke Gesture Input  
*Memorial University of Newfoundland, York University, Carleton University*
- 2022 Investigating Cross-Modal Approaches for Evaluating Error Acceptability of a Recognition-Based Input Technique  
*Ubicomp '22* (<https://www.youtube.com/watch?v=JGi9HqP6qT8>)
- 2020 Investigating the Necessity of Delay in Marking Menu Invocation  
*CHI '20* (<https://www.youtube.com/watch?v=MDyfd0Jwvr4>)
- 2019 Leveraging Distal Vibrotactile Feedback for Target Acquisition  
*CHI '19* ([https://www.youtube.com/watch?v=wtDrc6Pi\\_vs](https://www.youtube.com/watch?v=wtDrc6Pi_vs))