# RACHEL L. FRANZ

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## EDUCATION

**University of Washington, Seattle, WA, USA**
PhD Information Science
Concentration: Human-Computer Interaction, Accessibility, Virtual Reality
Advisor: Prof. Jacob O. Wobbrock

**University of Toronto, Toronto, ON, Canada**
MSc Computer Science
Concentration: Human-Computer Interaction
Advisors: Prof. Khai Truong and Prof. Ron Baecker

**Carnegie Mellon University, Pittsburgh, PA, USA**
BHA (Bachelors of Humanities and Arts)
Major in Human-Computer Interaction
Concentration: Cognitive Science and Architecture, Cum Laude

## EMPLOYMENT

Nov 2024-Present — **Assistant Professor, Hong Kong University of Science and Technology (Guangzhou), Guangzhou, China**

Jun-Sep 2022 — **Research Intern, Apple, Seattle, Washington**
Designed and implemented an augmented reality (AR) mobile application that enabled people with vision impairments to author AR environments

Jun-Sep 2021 — **Research Intern, Adobe, San Jose, California**
Designed and implemented a graphics shader that made virtual environments accessible for virtual reality (VR) users with color vision deficiency

Jan-Jul 2020 — **Part-Time Researcher, Microsoft Research, Redmond, Washington**
Implemented an accessible VR scene-viewing technique for people with mobility impairments

Jun-Sep 2019 — **Research Intern, Microsoft Research, Redmond, Washington**
Devised a VR scene taxonomy and implemented accessible VR scene-viewing techniques for people with limited head mobility

2014-2015 — **Research Assistant, Technologies for Ageing Gracefully lab (TAGlab), University of Toronto**
Conducted two large deployment studies investigating the feasibility of a communication app for reducing social isolation in older adults living in long-term care facilities

May-Aug 2012 & 2013 — **Research Intern, SIFT, Minneapolis, MN**
Designed the interface for a comic book creation game for veterans with PTSD

## AWARDS AND HONORS

Mar 2021 — **2021 Meta Fellowship Awardee, AR/VR Future Technologies Team, Meta**
Declined due to accepting Apple fellowship; award included 2 years of funding to work on projects to make VR accessible for people with motor impairments

Mar 2021 — **2021 Apple Scholar, Apple Scholars in AI/ML PhD fellowship program, Apple**

1 of 15 recipients of the 2021 Apple Scholars in AI/ML PhD fellowship; awarded 2 years of funding to make VR accessible for people with motor impairments

Dec 2020 **Meta Reality Labs Research Fund, Meta**
1 of 8 proposals chosen for a $75,000 grant towards making VR accessible to people with motor impairments

Apr 2018 **CRA-WP Grad Cohort Workshop for Women**
Invited to attend workshop to increase participation of women in computing-related studies

Apr 2017 **Honorable Mention, NSF Graduate Fellowship Research Program**
National Science Foundation

Oct 2017 **National Finalist, AGEWELL and Hacking Health National Ideathon Competition**
Selected as one of seven finalists in national competition to design technologies for seniors at the AGEWELL Annual Conference

Nov 2012 **Recepient of the Small Undergraduate Research Grant (SURG), Carnegie Mellon University**
Developed a questionnaire to evaluate spatial cognition.

## PATENTS

2023 Jose Ignacio Echevarria Vallespi, **Rachel Franz,** and Paul Asente. 2023. Partially texturizing color images for color accessibility. U.S. Patent Application No. 17/651,373 2023.

## PUBLICATIONS

### CONFERENCE PAPERS

2023 **Rachel L. Franz**, Jinghan Yu, Jacob O. Wobbrock. 2023. Comparing locomotion techniques in virtual reality for people with upper-body motor impairments. ACM Conference on Computers and Accessibility (ASSETS) 2023. 1-14.

2021 **Rachel L. Franz**, Sasa Junuzovic, Martez Mott. 2021. Nearmi: A framework for designing point of interest techniques for VR users with limited mobility. ACM ASSETS 2021. 1-14.

2021 Jaisie Sin, **Rachel L. Franz**, Cosmin Munteanu, and Barbara Barbosa Neves. 2021. Digital Design Marginalization: New perspectives on designing inclusive interfaces. ACM Conference on Human Factors in Computing Systems (CHI) 2021. 1–11.

2019 **Rachel L. Franz**, Jacob O. Wobbrock, Yi Cheng, Leah Findlater. 2019. Perception and adoption of mobile accessibility settings by older adults experiencing ability changes. ACM ASSETS 2019. 267-278.

2019 **Rachel L. Franz**, Leah Findlater, Barbara Barbosa Neves, and Jacob O. Wobbrock. 2019. Gender and help seeking by older adults when learning new technologies. ACM ASSETS 2019. 136-142.

2018 Dhruv Jain, **Rachel L. Franz**, Leah Findlater, Jackson Cannon, Raja Kushalnagar, and Jon Froehlich. 2018. Towards accessible conversations in a mobile context for people who are deaf and hard of hearing. ACM ASSETS 2018. 81-92.

2015 Barbara Barbosa Neves, **Rachel L. Franz**, Cosmin Munteanu, Ronald Baecker, and Mags Ngo. 2015. “My hand doesn’t listen to me!”: Adoption and evaluation of a communication technology for the ‘oldest old’. ACM CHI 2015. 1593-1602.

2013 Nikola Banovic, **Rachel L. Franz**, Khai N. Truong, Jennifer Mankoff, and Anind K. Dey. 2013. Uncovering information needs for independent spatial learning for users who are visually impaired. ACM ASSETS 2013. 1-8.

### JOURNAL ARTICLES

2024 **Rachel L. Franz**, Sasa Junuzovic, Martez Mott. 2024. A virtual reality scene taxonomy: Identifying and designing accessible scene-viewing techniques. ACM Transactions on Computer-Human Interaction 31 (2), 1-44.

2019 Barbara Barbosa Neves, **Rachel L. Franz**, Rebecca Judges, Christian Beermann, and Ron Baecker. 2019. Can digital technology enhance social connectedness amongst older adults? A feasibility study. Journal of Applied Gerontology 38 (1), 49-72.

2018 **Rachel L. Franz**, Ron Baecker, and Khai N. Truong. 2018. "I knew that, I was just testing you": Understanding older adults' impression management tactics during usability studies. ACM Transactions on Accessible Computing 11 (3), Article 15. 1-23.

2018 Barbara Barbosa Neves, **Rachel L. Franz**, Cosmin Munteanu and Ron Baecker. 2018. Adoption and feasibility of a communication app to enhance social connectedness amongst frail institutionalized oldest old: An embedded case study. Information, Communication & Society 21 (11), 1681-1699.

### BOOK CHAPTERS

2019 **Rachel L. Franz** and Barbara Barbosa Neves. 2019. Usability is ageless: Conducting usability tests with older adults. Ageing and Digital Technology. 99-114.

2019 **Rachel L. Franz**, Barbara Barbosa Neves, Carrie Demmans Epp, Ronald Baecker, and Jacob O. Wobbrock. 2019. Why and how think-alouds with older adults fail: Recommendations from a study and expert interviews. Perspectives on Human-Computer Interaction Research with Older People. 217-235.

### WORKSHOP PAPERS

2018 **Rachel L. Franz**, Leah Findlater, and Jacob O. Wobbrock. 2018. Lost in transition: The importance of conceptualizing aging as a process in accessibility research. In Workshop on "Designing Interactions for the Aging Populations" ACM CHI 2018. 53–58.

2015 **Rachel L. Franz**, Cosmin Munteanu, Barbara Barbosa Neves, and Ronald Baecker. 2015. Time to retire old methodologies? Reflecting on conducting usability evaluations with older adults. ACM Conference on Mobile Human-Computer Interaction (MobileHCI) 2015. 912-915.

### POSTER PAPERS

2019 **Rachel L. Franz**, Leah Findlater and Jacob O. Wobbrock. 2019. Just ask me: Comparing and older adults' knowledge of their optimal touchscreen target sizes. ACM ASSETS 2019. 591-593.

2014 **Rachel L. Franz**, Siyan Zhao, and Roberta Klatzky. 2014. Investigating the accuracy of mental representations of tactile maps. Stanford Undergraduate Psychology Conference.

### TEXTBOOKS

2017 Amy J. Ko and **Rachel L. Franz**. 2017. Design Methods.

## TEACHING

Spring 2021 **INFO 300: Research Methods, University of Washington**
Teaching Assistant

Spring & Fall 2020, Winter 2021 **INFO 380: Information Systems Design and Analysis, University of Washington**
Teaching Assistant

Winter 2020 **IMT 570: Research and Analysis for Information Management Professionals,**

**University of Washington**
Teaching Assistant

Fall 2019 **INFO 340: Client-Side Development, University of Washington**
Teaching Assistant

Spring 2019 **IMT 597: Master's Capstone 2, University of Washington**
Teaching Assistant

Winter 2019 **IMT 596: Master's Capstone 1, University of Washington**
Teaching Assistant

Fall 2017 **INFO 360: Design Methods, University of Washington**
Teaching Assistant

Fall 2015, Winter 2016, Winter 2017 **CSC318: The Design of Interactive Computational Media, University of Toronto**
Teaching Assistant

Summer & Fall 2016 **CSC309: Programming on the Web, University of Toronto**
Teaching Assistant

Fall 2014 **CCT 380: Human-Computer Interaction and Communication, University of Toronto**
Teaching Assistant

## MENTORING

Winter 2023 Jinghan "Alyson" Yu, BSc Informatics (UW'24)

Spring 2022 Xenia Lin, MSc Human Centered Design & Engineering (UW'23)

Spring 2019 Aimee Olivier, MSc Information Management (UW'23)

Spring 2019 Maeve Rogers Edstrom, MSc Information Management (UW'19)

Spring 2018 Yi "Carol" Cheng, Bsc Informatics (UW'18)

## SERVICE

2016, 2018-2020 **Reviewer: ACM ASSETS, CHI, TACCESS**

Apr 2018 **Technology Assistant, Merrill Gardens, Seattle, Washington**
Volunteered for a technology assistance group to introduce older residents to novel technologies and assist with technology-related issues

Apr-Aug 2017 **Christie Gardens Technology Office Hours Founder and Organizer, Toronto, ON**
Organized a group of volunteers from the University of Toronto to provide technology assistance to older adult residents of Christie Gardens Retirement Home

Apr-Jun 2017 **Teaching Assistant, Bernard Betel Centre, Toronto, ON**
Volunteered as a teaching assistant for a course on social media and web search at a senior center

Apr 2014 **Student Volunteer, ACM CHI 2014, Toronto, ON**
Assisted with conference organization and logistics