Noah Zijie Qu
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Link to Google Scholar page
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I am an interdisciplinary researcher working in the overlap between Human-Factors Engineering, Interaction Design, and New Media Art. I investigate the uses and perceptions of creative/communication technologies, with training in qualitative and quantitative data analysis, experimental design, and survey design. My research has developed my design and prototyping skills in voice technology, mixed reality, and transmedia storytelling. I have four years of research experience working with older adults.

CURRENT ACADEMIC POSITION

Ph.D. Candidate in Human Factors Engineering 2022 – 2025
Faculty of Applied Science and Engineering and Department of Mechanical and Industrial Engineering, **University of Toronto** (Canada)

EDUCATION

M.A. in Digital Direction | Distinction 2019 – 2021
School of Communication, **Royal College of Art** (UK)

B.F.A. in Visual Communication 2014 – 2018
School of Arts and Department of Design, **Chongqing University** (China)

PUBLICATIONS

Journal Articles

1. **Qu, N. Z.**, Li, J., & Chignell, M. (2025). Stories by the campfire: use of generative AI voice assistants to support older adult reminiscence self-efficacy. *AI & SOCIETY*, 1-22.

2. **Qu, N. Z.**, Li, J., Kongmanee, J., & Chignell, M. (2024). Public opinion on types of voice systems for older adults. *Journal of Rehabilitation and Assistive Technologies Engineering*, 11, 20556683241287414.

3. Gilbert, T. K., **Qu, N. Z.**, Ju, W., & Li, J. (2023). Fleets on the streets: How number, affiliation and purpose of shared-lane automated vehicle convoys influence public perception and blame. *Transportation research part F: traffic psychology and behaviour*, 93, 294-308.

Conference Proceedings

1. **Qu, N. Z.**, Li, J., & Chignell, M. (2025, September). "Do What I Say": Designing a Voice Assistant to Help Train Older Adults in Product Assembly. In *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care* (Vol. 14, No. 1, pp. 11-15). Sage CA: Los Angeles, CA: SAGE Publications.

2. Li, J., **Qu, N. Z.**, & Penaranda Valdivia, K. (2022, December). Design of a social media voice assistant for older adults. In *International Conference on Social Robotics* (pp. 75-88). Cham: Springer Nature Switzerland.

3. **Zijie Qu, N.**, Henderson, K., Li, J., & Chignell, M. (2022, September). Dealing with Problematic Asymmetries in Caregiving Relationships: A Role for Social Robots? In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 66, No. 1, pp. 13-17). Sage CA: Los Angeles, CA: SAGE Publications.

Book Chapters

1. **Qu, N. Z.**, Li, J., & Chignell, M. (Accepted). A Possible Role for Voice Assistants in Improving Domain-Specific and General Self-Efficacy of Older Adults: Using Technology to Improve Resilience. *Manuscript Accepted by Advances in Digital Health for Aging Populations - Innovative Strategies for Elderly Care.* Publisher: CRC Press - Taylor & Francis Group.

Under Review

1. **Qu, N. Z.**, Li, J., & Chignell, M. Voice-Powered Assembly: Boosting Self-Efficacy in Older Adults with "Build2Race". *Manuscript submitted to ACM Transactions on Accessible Computing.*

2. **Qu, N. Z.**, Li, J., & Chignell, M. Aligning the Design of Voice Assistants with Older Adults' Learning Preferences and Needs in Health-Related Contexts. *Manuscript submitted to Computers in Human Behavior: Artificial Humans*.

3. **Qu, N. Z.**, Li, J., & Chignell, M. "It Makes Me Feel Confident": Older Adult Understanding of Voice Assistants Targeting Improved Self-Efficacy. *Manuscript submitted to Universal Access in the Information Society*.

4. Chignell, M., **Qu, N. Z.**, & Li, J., Measuring Minds Without Data: How AI Derives Reliable Human Constructs from Language Alone. *Manuscript submitted to Journal of Experimental & Theoretical Artificial Intelligence.*

CONFERENCE PRESENTATIONS

1. Chignell, M., & **Qu, N. Z.**, "Do What I Say": Designing a Voice Assistant to Help Train Older Adults in Product Assembly, *HFES International Symposium on Human Factors and Ergonomics in Health Care*, Toronto, Canada, April 1, 2025.

2. **Qu, N. Z.**, "Voice-Powered Assembly: Boosting Self-Efficacy in Older Adults with 'Build2Race'", *Healing Interaction. Body.mind.machine. A workshop, demonstration, idea exchange, community discussion and Sunday PIZZA brunch.*, University of Toronto, October 6, 2024.

3. **Qu, N. Z.**, "Dealing with Problematic Asymmetries in Caregiving Relationships: A Role for Social Robots?", *52nd Annual Scientific and Educational Meeting of the Canadian Association on Gerontology*, Toronto, Canada, October 28, 2023.

4. Li, J., **Qu, N. Z.**, & Penaranda Valdivia, K., "Design of a Social Media Voice Assistant for Older Adults", *The Inaugural International Conference on Aging, Innovation & Rehabilitation*, Toronto, Canada, May 8, 2023.

5. **Qu, N. Z.**, "Design of a Social Media Voice Assistant for Older Adults", *14th International Conference of Social Robotics*, Florence, Italy, December 13, 2022.

6. **Qu, N. Z.**, "Dealing with Problematic Asymmetries in Caregiving Relationships: A Role for Social Robots?", *Inter-University Workshop*, University of Toronto, November 19, 2022.

TEACHING

1. Teaching Assistantship, *MIE242H1: Foundations of Cognitive Psychology*, University of Toronto. Delivered a guest lecture "*Interactions with Voice Assistants*," graded assignments, and mentored group projects on systematic literature reviews for 24 students. Toronto, Canada, 2025.

2. Tutor (one-on-one mentorship), *INSTART Art Design Education*. Mentored three undergraduate students in the development and execution of graduate-level projects in interaction design and digital art. Nanjing, China, 2021.

EXHIBITS

1. Akhtar, A., Anund, S., Baez, L., De Guzman, A., **Qu, N. Z.**, "Infinity vs. The Company", *Work-In-Progress Show*, Royal College of Art, London, UK, June 2020.

2. Baez, L., **Qu, N. Z.**, Vera Villalobos, D., "You're in the way", *IRCAN Forum Workshop*, Paris, France, March 2020.

ART & RESEARCH PROJECT

1. "Moving VR, Moving Body and Mind – Play, Labor and Learning to Be Well". Co-creator, interaction designer, and VR developer on a movement-based mixed-reality environment supporting student mental health and wellbeing. Collaborated with theatre, Indigenous, and computational arts practitioners to prototype an interactive VR interface that integrates digital dramaturgy, land-based storytelling, and embodied movement as forms of arts-based mental health support. University of Toronto, 2024–2025.

2. "You're in the Way". Co-creator of an interactive installation combining 3D-printed sculptural forms, projection mapping, and layered sound to critique overtourism and the degradation of cultural sites. Designed an audience-responsive system in which viewers' proximity modulates overlapping narrative and "noise" soundscapes, revealing how social, visual, and acoustic clutter can obscure intimate relationships to cultural artifacts, particularly in the context of mass tourism and pandemic-era reflection. IRCAN Forum Workshop, Paris, 2020.

RESEARCH FUNDING (AWARDED)

Start Date	End Date	Principle Investigator	Co-Investigator	Granting Agency	Grant Title	Total Amount
2024	2024	Antje Budde	Noah Zijie Qu	Inlight Student Mental Health Research Initiative	Moving VR, Moving body and mind - Play, labor and learning to be well	$29,800

TECHNICAL PROFICIENCY

- Design: Graphic Design, User Experience/ Interface Design.
- Digital Aided Making: Arduino, 3D Printing.
- Programming: Python, Processing, P5.JS., HTML, CSS, JavaScript, A-Frame.
- Game Engine: Unity.
- Microsoft Office: Word, PowerPoint, Excel.
- Adobe Creative Suites: Photoshop, Illustrator, InDesign, After Effects, Premiere Pro.
- Statistical Computing: R, RStudio.
- Thematic Coding: NVivo.

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