

Muhe Yang

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McGill University School of Information Studies | 3661 Peel, Montreal, QC, Canada H3A1X1

EDUCATION

Ph.D. Candidate in Information Studies

Sep. 2019–July 2025

McGill University

Montreal, QC, Canada

School of Information Studies

- Research interests: Human-Computer Interaction, Accessibility, Design for older adults, Health
- Research topic: *Supporting Physical Activity in Later Life* | Advisor: Prof. Dr. Karyn Moffatt

M.F.A. in Information Design and Visualization

Sep. 2015–May 2017

Northeastern University

Boston, MA, U.S.

College of Arts, Media and Design

- Master's thesis: *Visiting, Picturing and Experiencing the Chinese Garden* | Advisor: Prof. Dr. Kristian Kloeckl
- Thesis design project: *Visualizing Seasonal Change in the Chinese Garden* | Advisor: Paul Kahn

B.Eng. in Industrial Design

Sep. 2010–July 2014

Taiyuan University of Technology

Taiyuan, Shanxi, China

College of Mechanical Engineering

- Graduation design project: *Blossom—Stainless Kitchen Utensils Serial Design* | Advisor: Prof. Dr. Jing Zhao

EXPERIENCE

ACT Lab, McGill University

Sep. 2019–Present

Research Assistant & Principal Investigator

- Doctoral research (*Supporting physical activity in later life: Perspectives from older adults*) on designing technologies for older adults living alone to support their physical activity. This mixed-methods project uses a human-centered design methodology and involves three phases—understanding user needs through diaries and semi-structured interviews, surfacing solutions through co-design workshops, and exploring older adults' preferences about design concepts through interviews; data were analyzed primarily through thematic analysis. Research findings have been either published at or submitted to top-tier HCI venues.
- Leading the *Inclusive Co-Design of AI Systems* project that focuses on improving the practices of co-designing AI technologies with older adults.

School of Information Studies, McGill University

Jan.–Sep. 2022

Research Assistant supervised by Dr. Rebekah Willson and Dr. Benjamin Fung

- *Defending Our Cyberspace: AI-powered search engine for cyber threat intelligence* NSERC Project.
- Conducted literature review on the information needs of cybersecurity reverse engineers.
- Identified research gaps and potential directions, proposed study designs.

Master's thesis & follow-up independent research project: Information visualization of seasonal color change in the environment

Jan. 2017–Jan. 2020

Principal Researcher

- Master's thesis project: designing visualizations showing visitors' experience of seasonal colour change in a Chinese garden.

- Completed a follow-up research based on the thesis as a self-initiated independent project, involving collecting and analyzing data, proposing a new approach of visualizing seasonal colour change. Results have been published in a peer-reviewed journal.

Taiyuan Jiaofei Geology Information Technology Co., China

Sep. 2017–Dec. 2018

Design & Research Assistant

- Designed and built prototypes, assisted developing seism monitoring devices.
- Assisted patent application process.

China Industrial Design Institute, Shanghai, China

May–July 2016

Design Intern

- Assisted organizing the *1st Shanghai Open Data Week* (June 3–8, 2016) and *Shanghai Open Data Applications (SODA)* competition.
- Designed printed and digital materials for advertising related events.
- Responsible for running the official account on social media Weibo.

National Contest on Energy Saving & Emission Reduction, China

Feb.–May 2012

Undergraduate Researcher

- Conducted a research project on reducing energy waste in campus canteen system.
- Conducted a survey study, designed questionnaires, and collected and analyzed data.

PUBLICATIONS

Peer-Reviewed Full Papers

1. **Yang, M.**, Xia, M., & Moffatt, K. (under review). Overcoming Disruptions: Insights from Older Adults Living Alone on the Design of Physical Activity Promoting Technologies. 24 pages.
2. **Yang, M.**, & Moffatt, K. (2025). Breaking Barriers: Co-Designing Physical Activity Promoting Technologies with Older Adults Living Alone. *Submitted to ACM Transactions on Accessible Computing*. 27 pages. <https://dl.acm.org/doi/10.1145/3763796>
3. **Yang, M.**, & Moffatt, K. (2024). Navigating the Maze of Routine Disruption: Exploring How Older Adults Living Alone Navigate Barriers to Establishing and Maintaining Physical Activity Habits. *Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '24)*, Honolulu, HI, USA. 15 pages. doi.org/10.1145/3613904.3642842 [Acceptance rate 26.3%]
4. **Yang, M.** (2020). Investigating seasonal color change in the environment by color analysis and information visualization. *Color Research & Application*, 45(3), 503-511. doi.org/10.1002/col.22484

Short Papers, Poster Abstracts

5. **Yang, M.**, & Moffatt, K. (2025). Beyond Technology: Integrating Diverse Services to Support Physical Activity Among Older Adults Aging in Place. Position paper presented at the Workshop on Technology Mediated Caregiving for Older Adults Aging in Place at *the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '25)*, Yokohama, Japan. 5 pages.
6. **Yang, M.**, & Moffatt, K. (2024). A Preliminary Analysis of Older Adults' Reactions to Design Concepts for Physical Activity Support. *Proceedings of the 26th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '24)*, St. John's, NL, Canada. 5 pages. doi.org/10.1145/3663548.3688509

7. **Yang, M.** (2022). Supporting Physical Activity in Later Life: Perspectives from Older Adults. *Proceedings of the 24th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '22)*, Athens, Greece. 6 pages. doi.org/10.1145/3517428.3550411
8. **Yang, M.** and Moffatt, K. (2022). A Review of Empirical Studies on Persuasive Technology for Physical Activity: Common Practices and Current Trends. Poster presented at *Graphics Interface 2022 (GI '22)*, Montreal, QC, Canada. 2 pages.

Doctoral Thesis

9. **Yang, M.** (2025). *Supporting Physical Activity in Later Life: Perspectives from Older Adults*. McGill University.

Master's Thesis

10. **Yang, M.** (2017). *Visiting, picturing and experiencing the Chinese garden*. Northeastern University. doi.org/10.17760/D20257964

PRESENTATIONS

Research Presentations

1. Beyond Technology: Integrating Diverse Services to Support Physical Activity Among Older Adults Aging in Place. As a **plenary speaker** at the Workshop on Technology Mediated Caregiving for Older Adults Aging in Place at *the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '25)*, Yokohama, Japan. April 26–May 1, 2025.
2. A Preliminary Analysis of Older Adults' Reactions to Design Concepts for Physical Activity Support. At *the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '24)*, St. John's, NL, Canada. October 27–30, 2024.
3. Supporting Physical Activity in Later Life: Navigating Older Adults through the Interrelated Barriers to Remaining Physically Active. At *the 2024 AGE-WELL Annual Conference*, Edmonton, AB, Canada. October 23–24, 2024.
4. Navigating the Maze of Routine Disruption: Exploring How Older Adults Living Alone Navigate Barriers to Establishing and Maintaining Physical Activity Habits. At *the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI '24)*, Honolulu, HI, USA. May 11–16, 2024.
5. Supporting Physical Activity in Later Life: Perspectives from Older Adults. At the doctoral consortium and poster session of *the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '22)*, Athens, Greece. October 23–26, 2022.
6. A Review of Empirical Studies on Persuasive Technology for Physical Activity: Common Practices and Current Trends. Poster presented at *Graphics Interface 2022 (GI '22)*, Montreal, QC, Canada. May 16–19, 2022.
7. A Review of Empirical Studies on Persuasive Technology for Physical Activity: Common Practices and Current Trends. Poster presented at *the 14th EBSI-SIS Student Symposium in Information Studies*, Montreal, QC, Canada. April 28, 2022.

Design Presentations

8. Visualizing Seasonal Change in the Chinese Garden. Master's thesis project presented and exhibited at Gallery 360, Northeastern University, Boston, U.S.. May 2017.
9. Blossom—Stainless Kitchen Utensils Serial Design. Undergraduate graduation design project presented and exhibited at Siyun Hall, Taiyuan Technology of University, China. June 2014.

TEACHING ACTIVITIES

Undergraduate student supervision

- Miriam Xia (Fall 2023 and Winter 2024): Supervised design and research tasks, including generating design concepts about physical activity support, developing storyboards, and recruiting study participants.
- Yongan Yu (Fall 2024): Supervised development of an LLM chatbot to support older adults in identifying appropriate physical activity programs in their vicinity.

Teaching Assistant of McGill Master's course *INFS611 Research Principles & Analysis* Winter 2023

- Assisted the course instructor (Prof. Ilja Frissen) in preparing course materials and grading assignments and final papers.
- Supervised and assisted students during office hours.

Teaching Assistant of McGill Master's course *GLIS619 Information Behaviour and Resources* Fall 2021

- Assisted the course instructor (Prof. Joan Bartlett) in grading assignments and final paper.
- Supervised and assisted students during office hours.

Guest Lecture of McGill Master's course *INFS626 Usability Analysis & Assess* Winter 2023

- Gave a lecture on heuristic evaluation. (Instructor: Prof. Karyn Moffatt)

ACADEMIC AND COMMUNITY SERVICES

Peer Reviewer

- Conferences: ACM CHI'25, CHI'24, CSCW'24
- Journals: ACM Transactions on Accessible Computing, International Journal of Human-Computer Studies, Color Research and Application

Student Volunteer, ACM ASSETS'24, CSCW'21

Organizing Committee Member, the 13th EBSI-SIS Symposium on Information Studies in 2021

Executive Member and Communication Officer, Association for Information Science & Technology (ASIS&T) McGill Chapter 2020–2021

Community Volunteer, the Tech Café program of the Yellow Door, a senior centre (NGO) in Montreal, QC. Feb. 2022–Aug. 2023

- Awarded *Volunteer of the Month* in August 2022

AWARDS

Doctoral Research Scholarship (CA\$8,334) 2024–2025

Fonds de recherche du Québec – Nature et Technologies (FRQNT)

Wolfe Fellowship in Scientific and Technological Literacy (CA\$10,000) 2024–2025

Faculty of Arts, McGill University

SIS Travel Award from School of Information Studies, McGill University (CA\$1,000) 2025

Ph.D. Scholarship and Research Assistantship (CA\$112,400) School of Information Studies, McGill University	2019–2025
McGill Graduate Excellence Fellowship (CA\$17,000)	2019–2023
ACM SIGACCESS ASSETS'22 Doctoral Consortium Travel Grants (US\$2,000)	2022
Best Poster Award (CA\$50) 14th EBSI-SIS Symposium in Information Studies	2022
Volunteer of the Month from the Yellow Door, Montreal, QC	Aug. 2022
Comprehensive Examination Completion Award (CA\$500) School of Information Studies, McGill University	2021
CAMD Graduate Student Scholarship (US\$21,320) College of Arts, Media and Design, Northeastern University	2015–2017
The Second Prize in National University Student Social Practice and Science Contest on Energy Saving & Emission Reduction Taiyuan University of Technology	2012

SKILLSET

Research Skills:

- Research methods: interview, diary study, co-design workshop, questionnaire design, etc.
- Data analysis: qualitative analysis methods (e.g., thematic analysis, affinity diagramming), quantitative analysis methods (e.g., statistical analysis, etc.).

Design and Programming Skills:

- Product design and graphic design: sketching, rapid prototyping, storyboard, etc.
- Information visualization: R, Processing, D3, p5.js
- Programming: R, Processing, JavaScript, HTML

Languages: fluent English, native Chinese, basic French, basic Japanese, basic Korean.