

Min Max Seo

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EDUCATION

Ontario Tech University, ON, Canada

Master of Arts – Education (Master's Thesis in Mathematics Education)

Sep 2024 – Aug 2026

University of Waterloo, ON, Canada

Bachelor of Arts – Honours Psychology, Joint Honours Mathematics

Sep 2020 – Aug 2024

TECHNICAL SKILLS

- Programming Languages: C, Python, Racket, Scheme, R, LaTeX, Turing, Java
- Languages: English, Korean
- Data Analysis Tools: SPSS, RStudio

AWARDS & HONOURS & GRANTS

Weston Family Scholarship, Weston Family Foundation (\$37,400)	2021-2024
Samuel and Sonya Na Scholarship, Korean Canadian Scholarship Foundation (\$5,000)	2024
Kerr Ostrander Leadership for Tomorrow Award, University of Waterloo (\$2,500)	2024
Sameer Ahuja Perseverance Award, University of Waterloo (\$3,000)	2024
WMCTF Mathematics Teaching Fellowship, University of Waterloo (\$500)	2023
Piquard Family Award, University of Waterloo (\$1,200)	2022
Kay and Stuart Nicol Scholarship, University of Waterloo (\$2,500)	2022
University of Waterloo Merit Scholarship, University of Waterloo (\$1,000)	2021

RESEARCH INTERESTS

- Designing Accessible K-12 Mathematics Curriculum
- Reasoning & Decision-Making Processes in Mathematical Learning
- Examining the Roles of Self-esteem and Self-efficacy of Students in Learning Mathematics
- Teacher Education: Transferrable Impressions of Mathematics
- Supporting Students with Various Learning Needs in Mathematics Education
- Mathematics Education for People with Neurodevelopmental Conditions
- The Role of Harm-reduction in Addiction Treatment
- Importance of Lived/Living Experiences in Treating Mood Disorders
- Breaking the Cycle of 2SLGBTQ+ Youth Homelessness

RESEARCH EXPERIENCES

Faculty of Education, Ontario Tech University – *Research Assistant*

Sep 2024 – Current

Principal Investigator: Dr. Ami Mamolo

Social Development Lab, University of Waterloo – Research Assistant**Dec 2023 – Aug 2024**

Principal Investigator: Dr. Heather Henderson

Worked with Serena McDiarmid, Ph.D. student at SDL

Reasoning & Decision Making Lab, University of Waterloo – Research Assistant**Jun 2022 – Apr 2024**

Principal Investigator: Dr. Jonathan Fugelsang

Worked with Kaiden M Stewart, Ph.D. candidate, at the Reasoning and Decision Making Lab.

Faculty of Education, Wilfrid Laurier University – Research Assistant**Jun 2022 – Aug 2024**

Principal Investigator: Dr. Jennifer Holm

Worked with Dr. Jennifer Holm in the field of mathematics education.

PROJECTS**Restart Project – Youth Advisor, Collaborating Researcher****Jan 2023 – Current**PI: Dr. Maritt Kirst, WLU

Restart Project supports Housing First for Youth (HF4Y) by contributing to the knowledge of its long-term impact as a solution to youth homelessness in Canada.

- Participated in monthly virtual meetings to advise on research project designs
- Partnered on the grant proposal for the project
- Participated in training to conduct qualitative research
- Presented the qualitative results at a conference
- Reviewed a manuscript for publication

Validation of Waterloo Region Belonging Survey – Early Childhood Ver. – Research Assistant**May 2024 – Aug 2024**PI: Dr. Heather Hendeerson, UW

The Waterloo Region Belonging Survey – Early Childhood Version (WRBS-Early) is designed to measure children's (ages 3 to 7) sense of belonging in their community programs.

- Cleaned and organized the data using R

Learning & Teaching of Mathematics – Coordinator**Nov 2023 – Aug 2024**

Collaborated with other coordinators to create an online platform for learning & teaching of K-12 mathematics to reduce students' learning barriers and equip teachers better to guide students with additional learning challenges.

- Recruited other coordinators to lead the project
- Sub-divided the project into 5 different initiatives
- Organized bi-weekly meetings

Validation of Waterloo Region Belonging Survey – Middle Childhood Ver. – Research Assistant**Dec 2023 – Apr 2024**PI: Dr. Heather Hendeerson, UW

The Waterloo Region Belonging Survey – Middle Childhood Version (WRBS-Middle) is designed to measure children's (ages 8 to 13) sense of belonging in non-school contexts.

- Cleaned and organized the quantitative data using SPSS
- Examined the internal consistency, validity, and factor structure of the WRBS-Middle using SPSS
- Wrote a formal report on the validation processes and results

Bet on Yourself (BOY) – Research Assistant**Jan 2023 – Apr 2024**PI: Dr. Jonathan Fugelsang, UW

BOY is an in-person study that investigates how people process information. A series of logical problems were presented for each participant to solve, and they were asked to “bet on themselves” by rating their confidence level on each response.

- Recruited and provided participation credits to participants on SONA (psychology research experiences online platform)
- Oriented research participants to the study setting for data collection
- Participated in the online session of data cleaning and data analysis using R
- Proofread and reviewed the study before running the experiment

Thinking in Action (TIA) – Research Assistant

Jan 2023 – Nov 2023

PI: Dr. Jonathan Fugelsang, UW

TIA is an in-person study investigating how people process information when reasoning and making decisions.

- Recruited and provided participation credits to participants on SONA
- Oriented research participants to the study setting for data collection
- Proofread the study information

Cuing Confidently (CC) – Research Assistant

Jan 2023 – Nov 2023

PI: Dr. Jonathan Fugelsang, UW

CC is an in-person study examining how people think and reason.

- Participated in SONA researcher training
- Oriented research participants to the study setting for data collection
- Recruited and provided participation credits to participants on SONA

Teachers’ Use of Mathematics Apps – Research Assistant

Sep 2022 – Mar 2023

PI: Dr. Jennifer Holm, WLU

This qualitative study aimed to examine teachers’ experiences using math apps, mainly *Dreambox* and *Prodigy*, in their classrooms.

- Conducted a literature search and wrote a report of the results
- Participated in the research design meetings

CONFERENCES & PRESENTATIONS & TALKS

Kirst, M., **Seo, M.**, Sykes, J., Rozycki, V., Delair, L., Iuliani, L., Laing, S., Graham, J. (2025, February 24). *Examining the effectiveness of integrated housing, mental health and addiction service models for youth experiencing homelessness* [Conference Presentation]. The International Conference on the Prevention of Youth Homelessness, Toronto, ON, Canada.

Bates, S., **Seo, M.**, Harris, J. (2024, October 29). *Healthy and housed* [Conference Presentation]. CAEH24: National Conference on Ending Homelessness, Ottawa, ON, Canada.

Seo, M., Feng, A. (2024, June 2). *Presenting an emerging project about learning and teaching of mathematics: supporting current and future teachers of Ontario* [Gallery Walk]. Canadian Mathematics Education Study Group Annual Conference, Université Laval.

Seo, M., McDiarmid, S., Henderson, H. (2024, April 10). *How to assess children’s sense of belonging in non-school contexts: A validation study of children’s community and program-level belonging survey for ages 8 to 13* [Poster Presentation]. Psychology Discovery Conference, University of Waterloo.

Seo, M. (2024, February 27). *How to become an ally for colleagues and participants in the 2SLGBTQ+ community* [Presentation]. Safer Use Program, House of Friendship.

TEACHING INTERESTS

- K-12 Mathematics
- Introductory Psychology
- Mathematics Education
- Basic Research Method and Analysis
- Mathematical Logic
- Programming in R
- Calculus & Introductory Real Analysis
- Introductory Algebra & Linear Algebra
- Elementary Number Theory

TEACHING EXPERIENCES

Ontario Tech University – Teaching Assistant

Sep 2024 – Current

Working/worked as a teaching assistant for the following course(s):

- EDST 4470U – Trends and Issues in Educational Technology (Spring/Summer 2025)
 - 100 students enrolled
 - 105 hours assigned
- EDST 2700U – Special Education Foundations (Spring/Summer 2025)
 - 93 students enrolled
 - 105 hours assigned
- EDST 3710U – Diversity of Educational Needs (Winter 2025)
 - 56 students enrolled
 - Marking assignments and supporting students
 - 70 hours assigned
- EDST 3999U – Special Topic: Academic Skills for Education (Winter 2025)
 - 80 students enrolled
 - Marking assignments and supporting students
 - 70 hours assigned
- EDST 1000U – Foundations of Learning (Fall 2024)
 - 150 students enrolled
 - Marking assignments
 - 140 hours assigned

Mathematics Tutor

Oct 2017 – Current

Provided tutoring for curriculum-based and competition mathematics for students ranging from grade 7 to first-year university, both in-person and online.

- Offering free/pay-what-you-can tutoring for students with financial and learning challenges
- Created initial assessment using LaTeX for the group placements and curriculum development
- Designed lesson materials based on the Ontario mathematics curriculum
- Assessed students' progress by developing tests

Centre for Education in Mathematics and Computing – Math Circles Assistant

Sep 2022 – Dec 2022

The Centre for Education in Mathematics Computing (CEMC) is housed within the Faculty of Mathematics at the University of Waterloo.

- Designed, assisted, and delivered CEMC Math Circles in-person and online for grades 6, 7, and 8 students to enrich their skills and interests in mathematics
- Supported the organization of grade 9-12 CEMC Math Circles
- Proofread the Beaver Computing Challenge
- Participated in the Canadian Senior and Intermediate Contests marking sessions

INDUSTRY EXPERIENCES

Safer Use Program, House of Friendship – Harm Reduction Worker

Nov 2023 – Current

Safer Use Program (SUP) is an urgent medical care site within a local shelter in Waterloo, ON.

- Encouraged safer use practices
- Shared harm reduction information with participants who regularly use substances
- Facilitated a judgement-free environment by practicing trauma-informed care
- Provided verbal and medical interventions such as injectable naloxone during incidents of accidental drug poisoning

Global Affairs Canada – Technical Advisor, Data Innovation

Nov 2021 – Dec 2021

Global Affairs Canada (GAC) manages Canada's diplomatic relations, promotes international trade and provides consular support.

- Moved GAC's data action plan forward by developing a SharePoint naming convention and a thematic list
- Participated in daily meetings on MS Teams

LEADERSHIP & COMMUNITY INVOLVEMENTS

The Centre for Addiction and Mental Health – NYAC Member

Jun 2021 – Current

National Youth Action Council (NYAC) comprises a community of passionate youth mental health advocates across Canada.

- Participated in research, service planning and education opportunities at CAMH
- Facilitated an affirming environment to talk about mental health and substance use challenges

Measurement-Based Care Advisory Committee – Youth Advisor

Dec 2023 – Sep 2024

MBC Youth Advisory Committee advises on Measurement-Based Care (MBC) at the Centre for Addiction and Mental Health and related Youth Hubs.

- Developed the curriculum videos for service providers as an actor
- Participated in monthly virtual meetings to advise services

University of Waterloo Orchestra – Violist

Jan 2024 – Apr 2024

Participate in weekly rehearsals to prepare for an end-of-the-term concert.

- Beethoven Symphony No. 6
- Grieg Piano concerto in a minor
- Weber, Overture to Der Freischütz

LIFT Youth Experts Collective – Youth Advisor

Sep 2021 – Nov 2023

LIFT YEC is a youth committee to advise on the Individual Placement and Support (IPS) program at the Centre for Addiction and Mental Health.

- Participated in monthly virtual meetings to advise services and research project designs
- Drafted youth-friendly materials to explain the research project on the IPS program
- Advised on the materials to train staff members of youth hubs across Canada on the education/employment support program

The Glow Centre for Sexual and Gender Diversity – Trans Equity Director**Jan 2023 – Aug 2023**

The Glow Centre is the oldest-running university-based 2SLGBTQ+ group in Canada.

- Ensured that trans* students' voices were heard
- Advocated for the resolutions to the issues trans* students at the University of Waterloo were facing
- Maintained the Trans Resource Library

Waterloo Ready Mentorship, Math Orientation – Peer Mentor, Leader**Jun 2021 – Aug 2021**

The Waterloo Ready Mentorship program supports first-year students in transitioning smoothly into their first year at the University of Waterloo.

- Facilitated weekly hangouts for 30 first-year math students

The Women's Centre, University of Waterloo– Volunteer**Sep 2020 – Apr 2021**

The Women's Centre aims to provide a positive and supportive environment on campus for all women and trans* people.

- Received training to provide peer support for marginalized individuals
- Organized and supported events
- Provided feedback on trans* inclusion

Youth Committee, Friends of Ruby – Committee Member**Feb 2020 – Jan 2021**

Friends of Ruby is an organization dedicated to the progressive well-being of 2SLGBTQ+ youth (aged 16-29) through mental health, social, and housing services.

- Attended staff training and meetings to obtain general information about the organization
- Organized bi-weekly meetings to develop & manage programs for 2SLGBTQ+ youth
- Participated in discussions with the head directors of the organization
- Communicated with youth to hear their needs
- Documented outcomes of projects and future suggestions in an annual report

CERTIFICATIONS

- Certification of Completion in the Crisis Intervention Training
- Certification of Completion in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics (TCPS 2: CORE)
- Certification in Standard First Aid with CPR-C
- Certification of Completion in Applied Suicide Intervention Skills Training (ASIST)
- Certification in Trauma-Informed Care (TIC)
- Certification in Personal Health Information Privacy Training (PHIPA)

PROFESSIONAL DEVELOPMENT

- Building Capacity in the Scholarship of Mathematics Education 2025
- Making the Shift 2025: International Conference on the Prevention of Youth Homelessness
- Fields MathEd Forum 2024-2025
- CMS MathEd Online Meeting, 2024
- CAEH24: National Conference on Ending Homelessness, 2024
- Canadian Mathematics Education Study Group Annual Meeting, Université Laval, 2024
- In and Of the World: Framing Mathematics, 2024
- Supporting Teachers' Mathematical Thinking for Society, 2024
- Mathematics and Mathematical Thinking for Society, 2024

- Journal For Research in Mathematics Education (JRME) Talks, 2022-2023 & 2023-2024
- #Frayme2023
- Trans Math Day, 2022
- Canadian Mathematics Education Study Group Annual Meeting (Online), 2022
- Gender Equity in the Mathematical Study (GEMS) of Combinatorics, 2021
- Mathematical Summer in Paris, 2021

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

- Member of the Canadian Mathematics Education Study Group (CMESG)
- Member of the Ontario Association for Mathematics Education (OAME)
- Student Affiliate of the Canadian Psychological Association (CPA)
- Student Member of the Canadian Mathematical Society (CMS)
- Associate Member of the Korean Psychological Association (KPA)
- Member of Spectra, the Association for LGBT Mathematicians