

Jack McKoen

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EDUCATION

University of Alberta, *M.Sc. in Mathematics (Supervisor: Adam Topaz)* Expected 2025

University of Alberta, *B.Sc. Honors in Mathematics, with First Class Honors* 2022

SCHOLARSHIPS & AWARDS

Canada Graduate Scholarship - Master's, NSERC (*\$27 000*) 2024-2025
Research Proposal: Formalizing the ∞ -Categorical Yoneda Lemma in Lean

Walter H. Johns Graduate Fellowship, University of Alberta (*\$7100*) 2024-2025
top-up award for holding a NSERC CGS-M

Graduate Recruitment Scholarship, University of Alberta (*\$5000*) 2023-2024
“to recruit superior graduate students who have the potential to contribute to the University of Alberta’s community and research”

Undergraduate Student Research Award, NSERC (*\$9000*) 2022
Research Proposal: Formalizing Valuation Theory in Lean

Murray Thomas Gibson Memorial Scholarship, University of Alberta (*\$1500*) 2020-2021
for “superior academic achievement in the honors Mathematics program”

Jason Lang Scholarship, Government of Alberta (*\$2000*) 2020-2022
for academic achievement at an Alberta post-secondary institution

Dean’s Honor Roll, University of Alberta 2020-2022
for academic achievement

Alexander Rutherford Scholarship, Government of Alberta (*\$2500*) 2018
“to recognize and reward academic achievement of senior high school students and encourage them to pursue post-secondary studies”

EVENT CONTRIBUTIONS

- Jack McKoen, Formalizing Category Theory in Lean, *Alberta Graduate Mathematics and Statistics Conference*, University of Alberta, July 2024
- Jack McKoen (as workshop participant), *Formalizing algebraic geometry (AIM Workshop)*, Online, June 2024
- Jack McKoen, Simplicial Homotopies in Lean, *Lean Together 2024*, Online, January 2024

WORK EXPERIENCE

Graduate Teaching Assistant, *University of Alberta* 2023-Present

- conducting tutorials / seminars, grading assignments

Teaching Assistant, *Decima Robinson Support Centre* 2022-Present

- tutoring students for most first and second year mathematics courses

Undergraduate Teaching Assistant, *University of Alberta* 2022

- graded assignments for first and second year mathematics courses

Teaching Assistant & Grader, *Art of Problem Solving* 2019-2020

- assisted in introductory and intermediate mathematics classes by answering questions and directing students
- graded introductory and intermediate mathematics assignments for grades 2-12

TEACHING & GRADING (at UofA)

MATH 209 - Calculus for Engineering III, *grading* Fall 2024

MATH 102 - Applied Linear Algebra, *tutorial instructor, grading* Winter 2024

MATH 348 - Differential Geometry of Curves and Surfaces, *grading* Fall 2023

MATH 100 - Calculus for Engineering I, *tutorial instructor, grading* Fall 2023

MATH 216 - Introduction to Analysis, *tutorial instructor, grading* Fall 2022

OTHER EXPERIENCE

IAS \ PCMI Graduate Summer School Participant July 2024

Research Topic: Motivic Homotopy Theory

EXTRACURRICULAR

President of SIGMAS, University of Alberta 2024-2025

president of the Society in Graduate Mathematics and Statistics

Vice President of SIGMAS, University of Alberta 2023-2024

vice president of the Society in Graduate Mathematics and Statistics

APIRG Working Group Grant, Alberta Public Interest Research Group (*\$4000*) 2023-2025

grant awarded twice to student group *Edmontunes* while serving as (vice-)president