

MONTE MAHLUM

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(+1) 612-845-6048

EDUCATION

McGill University

B.S. in Mathematics, Minor in Physics

Charles University (Univerzita Karlova)

Semester Abroad

Notable Courses

14+ At honours level

Honours PDEs

Honours Algebra III (Groups, Rings, Modules)

Honours Analysis III (Measure Theory)

Honours Analysis IV (Functional Analysis)

Introduction to Lie Group Theory

Theory of Groups and Algebras for Particle Physics

General Theory of Relativity

Expected:

Honours Differential Geometry

2020 – 2024

Current GPA: 3.35

2023

Local GPA: Excellent

EXPERIENCE

Research Assistant, University of Minnesota, Twin Cities

July 2023 –

Mathematics research investigating convexity and convergence of a novel particle method developed by W. Lee, L. Wang, W. Li for high dimensional Wasserstein gradient flow equations. For reference, contact Professor Li Wang (email below).

RELEVANT EMPLOYMENT

Calculus Tutor, Jewish Academic Student Support

September 2022 – December 2022

Tutored one student throughout their Calculus I course at a Quebec college (CEGEP). Developed important mathematical teaching skills and worked to find creative ways for the student to stay engaged when confronted with confusion. For reference, contact Micheal Calkhoun at micheal@jasstutors.com.

PROJECTS

Fibrations Podcast

September 2022 –

Season 1 explores the academic research being conducted at McGill University. Consists of five episodes interviewing researchers in five different fields. Listen at soundcloud.com/fibrations.

Lecture on Lie Theory With Applications to Physics

June 2023

Notes from a 60-minute Lecture given as the final presentation for a Charles University physics course, Advanced Concepts in Symmetry. Link coming soon.

25-Hour McGill Physics Hackathon

October 2022

In a team of two, different numerical solutions to the Laplace Equation with fixed boundary conditions on the unit disc in \mathbb{R}^2 were explored and visualized. A novel numerical method was developed. Project Submission can be viewed [here](#).

LANGUAGES

English

First

Spanish

2014 –

Taken for seven years throughout secondary education. Current level of proficiency is conversational.

SKILLS

Programming Languages

Proficiency in Python, and Latex

Other

Jiu jitsu (since 2021), drums (since 2022), piano (since 2020), wilderness tripping guide for youth at YMCA Camp Widjiwagan (Summer 2021,2022) for reference, contact Karen Pick at karen.pick@ymcamn.org.

ACADEMIC REFERENCES

Professor Li Wang, University of Minnesota, liwang@umn.edu

Affiliation: research advisor.

Professor Josef Malek, Charles University, malek@karlin.mff.cuni.cz

Affiliation: Functional Analysis course instructor.

Professor Peter Grutter, McGill University, peter.grutter@mcgill.ca

Affiliation: Thermal Physics course instructor, podcast guest.