Yu Li

University of Waterloo
Undergraduate student

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GPA (by the end of Spring 2021): 98.14/100

Education

- **University of Waterloo** — Waterloo, ON, Canada
  BMath — *2020-2025*
  - Mathematical Physics
  - Pure Mathematics

About Me

I am currently an undergraduate student at the University of Waterloo, about to finish my second year. My primary fields of study are Mathematical Physics and Pure Mathematics. I am a strongly self-motivated learner, willing to devote myself to anything that arouses my curiosity. I also have a strong self-learning ability. When I was in high school, I taught myself theoretical mechanics, electrodynamics and quantum mechanics. Currently, I am interested in the physical and mathematical theories behind quantum computing. I would like to apply my knowledge of quantum mechanics to the physical implementation of quantum computers. I am also interested in the interaction between quantum information theory with other fields of mathematics and physics, such as relativity and algebra.

Awards, Grants & Honours

Name	Institution	Time
Mathematics National Scholarship	University of Waterloo	2020-2025
University of Waterloo President's Scholarship of Distinction	University of Waterloo	2020
Faculty of Mathematics Promissory Scholarship	University of Waterloo	2020
Term Distinction	University of Waterloo	Fall 2020 Winter 2021 Spring 2021
Euclid Mathematics Contest top 0.3%	Centre for Education in Mathematics and Computing	2019
Fermat Mathematics Contest Gold Medalist	Centre for Education in Mathematics and Computing	2019

Relevant Coursework (by the end of Winter 2022)

1. Mathematics
   - Mathematical Analysis (MATH 147, MATH 148, MATH 247)
   - Linear Algebra (MATH 146, MATH 245)
   - Vector Analysis & Fourier Analysis (AMATH 231)

- Differential Equations & Laplace Transform (AMATH 251, AMATH 353)
- Real Analysis (PMATH 351)
- Complex Analysis (PMATH 352)
- Mathematics for Quantum Computing (PMATH 343)
- Probability Theory (STAT 230)
- Non-Euclidean Geometry (PMATH 321)
- Set Theory & Abstract Algebra (MATH 145)

2. Physics
    - Classical Mechanics/Theoretical Mechanics (PHYS 121, AMATH 271)
    - Quantum Mechanics (PHYS 234, AMATH 373)
    - Electromagnetism/Electrodynamics (PHYS 122, PHYS 242)
    - Introductory Astronomy (PHYS 175)
3. Computer Science
    - Introduction to Computer Science (CS 115, CS 116)
    - Computational Mathematics (AMATH 242/CS 371)

    Programming Languages: Python, MATLAB, Maple, LaTex, Racket

Teaching

- MATH 237 (Multivariable Calculus for Honours Mathematics) Teaching Assistant/Marker

Languages

- Chinese (Mandarin) (Native Speaker)
- English (Fluent)