

# AJ Fong

Department of Pure Mathematics – University of Waterloo

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## Personal

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### Biographical.....

Born in Hong Kong – Hong Kong citizen

### Interests.....

Algebraic geometry and number theory

## Education

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### University of Waterloo

*PhD in Pure Mathematics*

2023–

Advisor: Prof David McKinnon

### University of Warwick

*Master of Mathematics (with Honours)*

2018–22

## Research Experience

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### University of Waterloo

*Doctoral Research*

2023–

### University of Warwick

*Fourth Year Project*

2021–22

*Points at rational distances from the vertices of a rectangle*, supervised by Dr Damiano Testa.

### University of Warwick

*Undergraduate Research*

2019

*Uniformisation of Riemann surfaces*, supervised by Dr Christopher Lazda.

## Awards

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### Croucher Foundation

*Croucher Scholarship*

2024–26

### University of Waterloo

*Pure Mathematics Excellence Entrance Award*

2023–24

## Teaching

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### University of Waterloo

Teaching Assistant

2023–24

MATH 237 Calculus 3 for Honours Mathematics

MATH 136 Linear Algebra 1 for Honours Mathematics

Tutoring Centre

MATH 135 Algebra for Honours Mathematics

ECE 206 Adv Calculus 2 for Electrical Engineers

### University of Warwick

Supervisor

2021–22

- Met with a group of first-year mathematics undergraduates twice a week.
- Provided support for all core first-year modules, including Analysis I and II, Foundations, Differential Equations, Introduction to Abstract Algebra and Linear Algebra, and marked their assignments.

### Service

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- Mentor for one student for Twoples, 2024
- Pure Mathematics Departmental Director of Mathematics Graduate Student Association, Waterloo 2024
- Council member of Graduate Student Association, Waterloo 2024
- President of Pride Factors, Waterloo 2024
- Marker for high school mathematics contests, Waterloo 2024
- Mentor for two students for Directed Reading Programme, Waterloo 2024
- Organiser for a student reading group on schemes and cohomology, Waterloo 2024
- Outreach and Communications Chair of Spectra, 2024
- Assistant for problem solving classes, Warwick 2022
- Mentor for eight students at Problem Solving Matters 2021

## Talks and Conferences

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**2024, 4–8 November:** Instructional workshop on rational points, Groningen, the Netherlands.

**2024, 7–9 June:** *Galois representations on the Picard groups of surfaces*, Ontario Graduate Mathematics Conference, Waterloo, Canada.

**2024:** Several talks in graduate student seminars at Waterloo, including *The mathematics of juggling*, *The combinatorics of toric varieties*, etc.

**2021, 25–28 August:** Talking Maths in Public Conference, online.

## Professional Affiliations

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- Canadian Mathematical Society, 2024–
- American Mathematical Society, 2024–

## Technical Skills

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**Web Development and Platforms:** HTML, CSS, Git, GitHub

**Programming Languages:**  $\text{\LaTeX}$ , Python, Matlab, Java

## Activities and Interests

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Jazz and Ballet Dance, Contract Bridge