

# YUNHAI XIANG

## EDUCATION

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### University of Western Ontario

*Ph.D.* in Mathematics (in progress)

Advisor: Chris Hall

Specialization: Number Theory and Arithmetic Geometry

### University of Western Ontario

*M.Sc.* in Mathematics

Advisor: Chris Hall

### University of Waterloo

*B.Math.* in Pure Mathematics, Honors, with Distinction

## SKILLS

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Languages	Mandarin (Native), English (Fluent), French (Beginner)
Programming	Python, C++, Lean
Softwares	LaTeX, SageMath, Git, Cinema 4D

## AWARDS

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### Mathematics Undergraduate Research Award

May 2022 — Aug 2022

- Undergraduate Research Award at University of Waterloo

## CONFERENCES & PRESENTATIONS

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### Conferences Attendance & Talks

- *Rigid Analytic Geometry*, Summer 2024, Ontario Graduate Mathematics Conference, UWaterloo
- *Schubert Calculus and Cohomology of Grassmannians*, Summer 2022, Canadian Undergraduate Mathematics Conference, Université Laval

### Seminar Attendance & Talks

- *Weyl Group and Root Datum*, Summer 2025, Algebraic Groups Seminar, UWO
- *Hecke Operators*, Summer 2025, Algebraic Groups Seminar, UWO
- *Parabolic and Borel Subgroups*, Summer 2025, Algebraic Groups Seminar, UWO
- *Lie Algebras of Algebraic Groups*, Summer 2025, Algebraic Groups Seminar, UWO
- *Non-Archimedean Fields*, Summer 2024, Rigid Analytic Geometry Seminar, UWO
- *Admissible Topology*, Summer 2024, Rigid Analytic Geometry Seminar, UWO
- *Cones and Affine Toric Varieties*, Summer 2024, Toric Varieties Learning Seminar, UWO
- *Galois Cohomology*, Winter 2024, Graduate Student Seminar, UWO
- *Derived Categories*, Fall 2022, Algebraic Geometry Working Seminar, UWaterloo

## TEACHING

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### Teaching Assistantship

- MATH 2155, Mathematical Structures, Fall 2025
- CALCULUS 1000, Calculus 1, Fall 2025

- MATH 1229, Methods of Matrix Algebra, Summer 2025
- MATH 1228, Methods of Finite Mathematics, Summer 2025
- CALCULUS 1501, Calculus II for Mathematical and Physical Sciences, Winter 2025
- CALCULUS 1000, Calculus 1, Winter 2025
- MATH 3150, Elementary Number Theory I, Fall 2024
- CALCULUS 1000, Calculus 1, Summer 2024
- MATH 1229, Methods of Matrix Algebra, Summer 2024
- MATH 1228, Methods of Finite Mathematics, Summer 2024
- CALCULUS 1000, Calculus 1, Winter 2024

## SERVICES

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### **Seminar Organization**

- Algebraic Geometry Student Seminar, Fall 2024, co-organized with Alex Zwart
- Toric Varieties Learning Seminar, Summer 2024, co-organized with Nicolas Rieke

### **Mathematical Outreach**

- *Surreal Numbers and the Game of Go*, Summer 2025, Western Summer Math Camp
- *Mathematical Magic Tricks: Gilbreath's Principle*, Summer 2024, Western Summer Math Camp
- *Why is There no Quintic Formula*, Summer 2024, Western Summer Math Camp