

Chayim Lowen

Princeton University
Department of Mathematics
Fine Hall, Washington Road
Princeton NJ, 08540

Education

2023 – now **Princeton University**
Doctoral student in mathematics
Advisor: *June Huh*

2019 – 2023 **University of Toronto**
B.A. in Mathematics

Teaching

Princeton University

Winter 2026 **MAT104**, *Linear Algebra with Applications*, Assistant in Instruction.

Fall 2025 **MAT104**, *Calculus II*, Assistant in Instruction.

Winter 2025 **MAT425**, *Integration Theory and Hilbert Spaces*, Assistant in Instruction.

Fall 2024 **MAT215**, *Single Variable Analysis*, Assistant in Instruction.

University of Toronto

Winter 2023 **MAT136**, *Calculus II*, Teacher's Assistant.

Fall 2022 **MAT135H1**, *Calculus I*, Teacher's Assistant.

Winter 2022 **MAT136H1**, *Calculus II*, Teacher's Assistant.

Fall 2021 **MAT135H1**, *Calculus I*, Teacher's Assistant.

2020-2021 **MAT137Y1**, *Calculus with Proofs*, Teacher's Assistant.

Preprints

Structural properties of Białyński-Birula decompositions,
with Theodore Gonzales. *In progress.*

Simultaneous generating sets for flags,
with Federico Glauco and Noah Kravitz, [arXiv:2502.09530](https://arxiv.org/abs/2502.09530).

Talks

- Mar 2026 **Geometric and cohomological properties of Białyński-Birula decompositions,** Virginia Tech, Algebra seminar.
- Feb 2026 **Linear algebra over hyperfields,** Georgia Tech, Algebra seminar.
- Oct 2025 **Bounded ratios for Lorentzian matrices,** Mathematisches Forschungsinstitut Oberwolfach, Arbeitsgemeinschaft.
- Jul 2025 **What is a subspace?,** Institute for Advanced Study, Special Year seminar.
- Mar 2025 **A vexing vexillological counting problem,** Princeton University, GSS.

Awards

Norman Stuart Robertson Scholarship in Mathematics (2022),
University of Toronto.

Margaret Ronald Taylor and Thomas Paxton Taylor Scholarship (2022, 2020),
University of Toronto.

Professor R. K. Arnold Scholarship III (2022),
University of Toronto.

NSERC Undergraduate Student Research Award (2022),
University of Toronto.

Bev And Harvey Botting Scholarship I (2020),
University of Toronto.

C. David Naylor Scholarship (2019),
University of Toronto.