

William Easton

✉ wlmestn@gmail.com ✉ weaston.gr@dartmouth.edu ☎ (206) 930-2649

Education

Dartmouth College
Mathematics PhD

Sep. 2026 - present

University of Washington
BS in Mathematics, Minor in Physics

Sep. 2022 - June 2026

- **Coursework:** Algebraic Topology, Differential Geometry, Homological Algebra, Abstract Algebra (Groups, Rings, Fields, Modules), Representation Theory, Algebraic Number Theory, Real and Complex Analysis

Garfield High School
Valedictorian

Sep. 2018 - June 2022

Publications

Nilpotent Elements, Noncommutative Points and Base Field Sensitivity (with S. Ford, B. Greenfeld, and G. King) *Journal of Algebra*, accepted. <https://doi.org/10.1016/j.jalgebra.2025.09.029>

March 2025

Research paper which discusses the existence of point modules over graded-nil algebras and provides novel constructions of such algebras in extreme cases.

Research Experience

Mathematics REU Participant
University of Chicago

June - Aug. 2025

Studied and researched various topics in mathematics, especially geometric and algebraic topology. Some of the main topics studied were homeomorphism groups of manifolds, characteristic classes, and surgery theory.

Washington Experimental Mathematics Lab

Sep. - Dec. 2024

Was a member of a mathematics research group studying the topic “Nilpotency and geometric structures in noncommutative algebras over finite fields”.

Washington Directed Reading Program

March - June 2024/25

Participated twice in a guided self-study program learning about representation theory and algebraic geometry.

Teaching Experience

Teaching Assistant
Dartmouth College

Sep. 2026 - present

Graded students' exams, held office hours, and answered student questions.

Undergraduate Course Assistant

University of Washington

Sep. 2024 - March
2026

Graded homework and answered questions.

Topology Reading Group

Nov. 2024 - June 2025

Mentored advanced underclassmen interested in topology, handling organization and giving bi-weekly lectures on topics from point-set and algebraic topology, as well as differential geometry.

Lead Instructor

iD Tech

June – Aug.

2022/23/24

Taught classes on coding and other STEM topics to high schoolers. I was also part of the management staff, responsible for some organizational decisions and directing other instructors.

Talks

Topology Reading Group

Nov. 2024 - June 2025

Gave many hour-long talks introducing topics in topology and differential geometry, including bases, connectedness, the fundamental group, topological and smooth manifolds, and tangent vectors.

Husky Math Club

Jan., May, Nov. 2025

Gave three hour-long talks to the math club at UW on diagram chasing in homological algebra, the connection between finite topological spaces and simplicial complexes, and automorphism groups of Euclidean space.

Northwest Undergraduate Mathematics Symposium

Nov. 2025

Gave a fifteen minute talk to a local undergraduate conference on a theory unifying models of orientation and proving their equivalence.

UChicago REU

Aug. 2025

Gave a fifteen minute talk at the end of the REU on the subject I had been researching. I provided a fairly complete proof of the Stable Homeomorphism Theorem following Kirby, only omitting the proofs of some plausible lemmas.

Washington Directed Reading Program

June 2024/25

Gave fifteen minute talks at the end of each quarter in which I participated in the WDRP. They were introductions to representation theory and algebraic geometry aimed at the other program participants.

Technologies

I have extensive programming experience, mainly in the following languages and systems, sorted roughly by familiarity: Java, $\text{\LaTeX}$, Rust, Python, Mathematica, R, C++, JavaScript