

Alexander Wang

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Education

- Ph.D. candidate in Mathematics.
Advisor: Bianca Viray
The University of Washington. Seattle, WA. September 2021 - current.
- M.S. Mathematics.
The University of Washington. Seattle, WA. September 2021 - June 2024.
- B.S. Honors Mathematics, minor in Computer Science.
The University of Michigan. Ann Arbor, MI. September 2017 - December 2020.

Research

- *On the Hasse Principle for conic bundles over even degree extensions*, Sam Roven and Alexander Wang.
arXiv:2508.07564, submitted.
- *Centrally symmetric and balanced triangulations of $\mathbb{S}^2 \times \mathbb{S}^{d-3}$ with few vertices*, Alexander Wang and Hailun Zheng.
arXiv:1811.08505, European Journal of Combinatorics, Volume 85 (March 2020).
- Mathematics REU, The University of Michigan. *Extensions of Irreducible Representations of Quaternion Algebras over p -adic Fields*. Summer 2020.
Advisor: Karol Koziol
- Summer Program for Undergraduate Research, Cornell University. *The Inverse Problem for Rational Equivariant Cohomology*. Summer 2019.
Advisor: Harrison Chen
- Mathematics REU, The University of Michigan. *Balanced Triangulations of Sphere Products with Minimal Vertices*. Summer 2018.
Advisor: Hailun Zheng

Presentations

- *Realizable degree sets of superelliptic curves over Henselian fields* (joint work with Alexander Galaraga), Oregon Number Theory Days. Oregon State University. Corvallis, OR. March 1, 2025.
- *The Brauer–Manin obstruction on del Pezzo surfaces of degree 2*, Back-to-School Seminar. The University of Washington. Seattle, WA. October 25, 2024.
- *Realizable degree sets of superelliptic curves over Henselian fields* (joint work with Alexander Galaraga), Group, Lie, and Number theory Seminar. The University of Michigan. Ann Arbor, MI. March 21, 2024.
- *Classification of Degree Sets of Superelliptic Curves over Henselian Fields*, poster presentation (joint work with Alexander Galarraga). Western Algebraic Geometry Symposium Fall 2023. Washington University of St. Louis. St. Louis, MO. November 4, 2023.

- *Factoring Prime Numbers*. Michigan Math Club. The University of Michigan. Ann Arbor, MI. March 21, 2024.
- *Primes, p -adics, and an exploration of local fields*, 1-2-3 Seminar. The University of Washington. Seattle, WA. January 19, 2024.
- *Number Fields*, 1-2-3 Seminar. The University of Washington. Seattle, WA. January 24, 2023.
- *Divisors and the Riemann-Roch Theorem*, Dynamics and Geometry Seminar. The University of Washington. Seattle, WA. October 20, 2022.
- *Extensions of Irreducible Representations of Quaternion Algebras over p -adic Fields*, REU Seminar Series. The University of Michigan. Ann Arbor, MI. July 30, 2020.
- *The Inverse Problem for Rational Equivariant Cohomology*, Cornell SPUR Undergraduate Research Forum (with Ying Wang and Juntao Zhou). Cornell University. Ithaca, NY. July 24, 2019.
- *Balanced triangulations on few vertices and an implementation of cross-flips*, software demonstration on behalf of Lorenzo Venturello. FPSAC 2019. University of Ljubljana. Ljubljana, Slovenia. July 2, 2019.
- *Triangulations of the product of spheres with few vertices*, poster presentation. FPSAC 2019. University of Ljubljana. Ljubljana, Slovenia. July 1, 2019.
- *Balanced Triangulations of Sphere Products with Minimal Vertices*, REU Seminar Series. The University of Michigan. Ann Arbor, MI. July 19, 2018.

Teaching

- Lecturer/Organizer, PCMI Experimental Math Lab 2025. Park City Mathematics Institute. July 2025.
- Lead Teaching Assistant. The University of Washington. August 2024 - June 2025.
- Instructor, Math 340: Advanced Linear Algebra. The University of Washington. Summer 2023.
- Instructor, Math 224: Advanced Multivariable Calculus. The University of Washington. Spring 2023.
- Teaching Assistant. Math 120, Math 124, Math 125, Math 207, Math 381. The University of Washington. Autumn 2021 - Present.
- Washington Directed Reading Program Mentor. Winter 2023, Autumn 2023, Autumn 2024, Spring 2025.
- Washington Experimental Math Lab Mentor. Autumn 2025.
- Math Study Center Tutor. The University of Washington. Summer 2022, Winter 2024.
- Course Assistant, Grader. Math 185, Math 186, Math 310, Math 395, Math 490. The University of Michigan. Fall 2018 - Fall 2020.
- Teaching Assistant. Introduction to Computer Science. Thomas Jefferson High School for Science and Technology. Alexandria, VA. Summer 2016.

Activities

- Graduate Student Representative. Department of Mathematics, University of Washington. August 2023 - June 2024.
Member of the Graduate Program Committee and performed general graduate student advocacy.

- Graduate Student Social Coordinator. Department of Mathematics, University of Washington. August 2023 - June 2024.
Organized departmental colloquium activities, incoming student activities, and general department events.
- Lemma Math Competition, Lead Organizer. Ann Arbor, MI. September 2019 - December 2020.
Creator and lead organizer of a regional math competition for high school students (now renamed Michigan Math Meet).
- Michigan Math Circle, Volunteer. Ann Arbor, MI. September 2018 - December 2020.
A weekly math workshop for local middle and high school students, conveying interesting and advanced mathematical topics at an introductory level.
- Wolverine Pathways, Volunteer. Ypsilanti, MI. September 2018 - December 2020.
An outreach program to provide mathematics enrichment to underprivileged middle school students with little exposure to extracurricular math.

Awards and Honors

- Math Excellence in Teaching Award 2022-23. December 2023.
- Finalist for the Math Excellence in Teaching Award 2021-22. December 2022.
- Provosts Scholarship, University of Washington. April 2021.
- Outstanding Graduating Senior Award, Michigan Math Department, April 2021.
- NSF Graduate Research Fellowship Program Honorable Mention, March 2021.
- Jack McLaughlin Award in Algebra, 2020. May 2020.
- Barry Goldwater Scholar, 2020. March 2020.
- James B. Angell Scholar. Winter 2019.
- USACO Platinum Division, April 2017.