

Andrew Huchala

ahuchala@uoregon.edu | ahuchala.com | +1(206)-473-9670

EMPLOYMENT

University of Oregon

Mathematics Graduate Teaching Fellow

2019 - present

Instructor of record for 13 undergraduate courses, teaching assistant for 18 sections, and grader for 5 advanced courses.

University of Washington, Seattle

Graphene Nanodevice Lab under Prof. David Cobden

Summer 2017 - Fall 2017

Conducted research with a team of graduate physics students fabricating topological insulating/superconducting devices. Also led a team of undergraduate physics and computer science students working on computer vision techniques (color clustering, perceptrons/neural networks) for monolayer material collection.

Sage Math Cloud (now CoCalc) under Prof. William Stein

SageManifolds project

Fall 2015 - Winter 2016

Created a physics section of math website to aid users in computations/visualizations of general relativity with interactive graphics of curved spacetime, equations, etc.

Web Developer

Summer 2014 - Winter 2015

Collaborated with a small team on front end web development, bug testing, bug fixing, documentation.

EDUCATION

University of Oregon

Ph.D. in Mathematics.

2026 (expected)

Dissertation: *Griffiths Residues for Grassmannians*,
supervised by Nicolas Addington.

University of Washington, Seattle

2018

B.S. in Mathematics.

Thesis: *Repeated Dimensions of Semisimple Lie Algebra Representations*,
supervised by William McGovern.

B.S. in Physics (comprehensive).

Mathematics degree with honors.

PAPERS AND PREPRINTS

Bounded core partitions and Borel–Weil–Bott

2025

with F. Gossow.

Submitted. [arXiv:2510.17239](https://arxiv.org/abs/2510.17239).

Pole order reduction via Griffiths residues on Grassmannians

2026+

with A. Yae.

(in preparation).

GRANTS AND AWARDS

NSF Summer Funding (under RTG Grant no. DMS-2039316)

Summer 2024

TEACHING

University of Oregon: *instructor of record unless noted otherwise*

Math 251: Calculus I	Fall 2025
Math 636 Algebraic Topology [Grader]	Spring 2025
Math 251: Calculus I	Winter 2025
Math 251: Calculus I	Fall 2024
Math 458: Cryptography [Grader]	Spring 2024
Math 607: Applied Mathematics [Grader]	Spring 2024
Math 246: Calculus for Biological Sciences	Fall 2023
Math 343: Statistical Models [Grader]	Spring 2023
Math 425/525: Statistical Methods [Grader]	Spring 2023
Math 111: Precalculus	Winter 2023
Math 241: Calculus for Business [TA, 4 classes]	Fall 2022
Math 107: Voting Theory	Summer 2022
Math 112: Trigonometry	Spring 2022
Math 112: Trigonometry	Winter 2022
Math 243: Statistics [TA, 4 classes]	Fall 2021
Math 107: Voting Theory	Summer 2021
Math 111: Precalculus	Summer 2021
Math 241: Calculus for Business [TA, 4 classes]	Winter 2021
Math 243: Statistics [TA, 4 classes]	Fall 2020
Math 101: Foundations of Math Modeling	Summer 2020
Math 111: Precalculus	Spring 2020
Math 111: Precalculus	Winter 2020
Math 111: Precalculus [TA, 2 classes]	Fall 2019

ART EXHIBITIONS

Girls' Angle Bulletin

Magazine to encourage girls' interest in mathematics

October 2021

Online Issue

Research as Art Competition

University of Oregon

Permanent installation in Eugene Airport

December 2020

Online Gallery

Creativity Counts

Jordan Schnitzer Museum of Art, University of Oregon

April - July 2020

Online Gallery

LEADERSHIP, COMMUNITY SERVICE, AND OUTREACH

Secretary, local chapter of American Mathematical Society (AMS)	2023 - 2026
Organizer, Graduate Student Teaching Seminar	2024 - 2025
Organizer, Graduate Student Combinatorics Seminar	2023 - 2024
Mentor, Directed Reading Program for undergraduates	2022 - 2023
Mentor, Incoming Graduate Students	2021

PRESENTATIONS

t-Core Partitions and Borel–Weil–Bott Student Combinatorics Seminar, University of Oregon	Oct 2025
Effective Use of Prediction in Teaching Student Teaching Seminar, University of Oregon	Oct 2025
MAA Best Practices of Course Design Student Teaching Seminar, University of Oregon	May 2025
The Hirzebruch-Riemann-Roch Theorem Student Combinatorics Seminar, University of Oregon	May 2025
A Framework for Understanding the Quality of Evidence Use in Education Student Teaching Seminar, University of Oregon	Feb 2025
The Weil Conjectures Student Geometry Seminar, University of Oregon	Feb 2025
Access and Equity in the Classroom Student Teaching Seminar, University of Oregon	Jan 2025
Hodge Theory in Positive Characteristic Student Algebra Seminar, University of Oregon	Nov 2024
Universal Design for Learning Student Teaching Seminar, University of Oregon	Nov 2024
Educational Benefits of Students Self-Explaining Material Student Teaching Seminar, University of Oregon	Oct 2024
Cohomology Ring of Complete Intersections in Complex Projective Space. Student Algebra Seminar, University of Oregon	May 2024
Small Teaching: Pretesting Student Teaching Seminar, University of Oregon	May 2024
Elliptic Curve Cryptography Student Combinatorics Seminar, University of Oregon	April 2024
Sphere Packings and Laminated Lattices Student Combinatorics Seminar, University of Oregon	Nov 2023
Spectral Graph Theory and the Action of Frobenius Student Combinatorics Seminar, University of Oregon	June 2023
Algebraic de Rham Cohomology and Hodge Theory Student Algebra Seminar, University of Oregon	May 2023
Matrix Products on Arithmetic Progressions Student Counting Seminar, University of Oregon	Feb 2023

Étale Cohomology	Nov 2022
Student Algebra Seminar, University of Oregon	
The Weil Conjectures	Oct 2022
Student Combinatorics Seminar, University of Oregon	

PROJECTS

Zeta function calculator

[Github.com/Ahuchala/ZetaFunctions](https://github.com/Ahuchala/ZetaFunctions)

2021 - present

Computes the zeta function of a smooth complete intersection in projective space; ongoing progress on computing the zeta function of smooth hypersurfaces in Grassmannians. See research statement for details and examples.

Hodge diamond calculator

[Ahuchala.com/research](https://ahuchala.com/research)

2024 - present

Computes Hodge numbers of complete intersections in projective space and Grassmannians from scratch; limited implementation for complete intersections in partial flag varieties.

Complex function implementations in GLSL

2021 - present

Implemented geometric, analytic, and number theoretic functions on [Cruz Godar's website](#) which run in parallel on the browser. Also, implemented all functions used by [this applet](#) for visualizing elliptic curves as complex tori.

Editor of the On-line Encyclopedia of Integer Sequences (OEIS)

2017 - present

[Ahuchala.com/oeis](https://ahuchala.com/oeis)

My website showcases original visualizations for some of my favorite integer sequences. I am an active OEIS contributor, with over a thousand edits and 37 authored sequences.

TECHNICAL SKILLS

Programming Languages

Python, Sage, Javascript, Julia, Java, C, C++, GLSL, Macualay2, Magma, Mathematica

Tools and Packages

CUDA, Gurobi, Keras, TensorFlow

CITIZENSHIP

United States