

TYNAN LAZARUS

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EMPLOYMENT

University of Arizona *2019-Present*

Lecturer *2023-Present*
Instructor *2019-2023*

EDUCATION

University of California, Davis *2014-2019*
Ph.D. of Mathematics

University of Hawai'i at Hilo *2010-2014*
BA of Mathematics
Minor in Physics

Overall GPA: 3.88
Math GPA: 3.91

TEACHING EXPERIENCE

Calculus 1 Coordinator January 2021 - Present
Math 122B & 125 - Calculus 1 *University of Arizona*

- Responsibilities include: Create course policies and calendars, organize faculty meetings, oversee ~ 25 sections/instructors, create common final exam and resources, provide advice and support to math 122B and math 125 instructors, curriculum development and maintenance

Instructor August 2019 - Present
Various Courses *University of Arizona*

- Instructor of record for
 - Math 116: Calculus Concepts for Business
 - Math 119A: Mathematics of Biological Systems: a calculus based approach
 - Math 120R: Calculus Preparation
 - Math 122A: Functions for Calculus
 - Math 122B: First-Semester Calculus
 - Math 129: Calculus II
 - Math 196L: Precalculus Supplemental Instruction Seminar
 - Math 323: Formal Mathematical Reasoning and Writing
 - Math 396L: Wildcat Proofs Workshop
- Responsibilities include: Creating and giving lectures, holding office hours, creating worksheets, creating and grading homework, quizzes, labs, and exams (paper and online)

Teaching Assistant October 2014 - June 2019
Various Courses *University of California, Davis*

- TA for MAT 17A, 17B, 21A, 21D, 108, 125A
- Responsibilities include: Holding a discussion section, holding office hours, grading homework, quizzes and exams

Associate Instructor*Math 125A*June 2018 - August 2018
University of California, Davis

- Instructor of record for MAT 125A - Real Analysis
- Responsibilities include: Lectures, holding office hours, creating and grading homework, quizzes and tests

Associate Instructor*Math 16A*August 2016 - September 2016
University of California, Davis

- Instructor of record for MAT 16A - Differential Calculus
- Responsibilities include: Lectures, holding office hours, creating and grading homework, quizzes and tests

Associate Instructor*Math 16B*September 2015 - December 2015
University of California, Davis

- Instructor of record for MAT 16B - Integral Calculus
- Responsibilities include: Lectures, holding office hours, creating and grading homework, quizzes and tests

Associate Instructor*Math 16B*June 2015 - August 2015
University of California, Davis

- Instructor of record for MAT 16B - Integral Calculus
- Responsibilities include: Lectures, holding daily office hours, creating and grading homework, quizzes and tests

Calculus 1 & 2 Teaching Assistant*Teaching Assistant*August 2013 - May 2014
University of Hawaii, Hilo

- Responsibilities include: Creating and grading homework, quizzes, and tests, holding office hours, creating and giving lectures

Mathematics Tutor*Kilohana Math Center*May 2013 - May 2014
University of Hawaii, Hilo

- Tutor University of Hawaii students in mathematics from basic math through Real Analysis and Abstract Algebra

Mathematics Tutor, ESL Tutor*The Learning Center*September 2011 - May 2013
University of Hawaii, Hilo

- Help English Second Language students with vocabulary, structure and grammar.
- Tutor Community College and University students in mathematics up to, and through, the calculus sequence.

RESEARCH**Research Interests:** Fractal Geometry, Optimal Transportation, Geometric Measure Theory**IMMERSE***Student*June-July, 2014
University of Nebraska, Lincoln

- Participant of the Intensive Mathematics: a Mentoring, Education and Research Summer Experience (IMMERSE)
- Attended classes in Applied Analysis and Commutative Algebra

Rutgers Math REU*Undergraduate Researcher*May-July, 2013
Rutgers University

- Participant of an REU through the Rutgers Math Department
- Conducted research in Knot Theory, specifically in computation techniques for computing the A-polynomial, Stable A-polynomial, and the Augmentation polynomial.

SUMSRI*Undergraduate Researcher*June-July, 2012
Miami University

- Participant of the Summer Undergraduate Mathematical Science Research Institute (SUMSRI).
- Classes in Measure Theory, Computational Algebraic Geometry, Graph Theory, Proof Writing.
- Conducted research in Tournament Theory.

- Intern for the Pacific Undergraduate Research Experience in Mathematics (PURE Math).
- Classes in Topology, Symbolic Dynamics, Algebraic Geometry.
- Conducted research in Abelian Sandpile Groups on Bipartite Graphs.

PAPERS AND PREPRINTS

- 2022, Unmotivated, Depressed, Anxious: Impact of the COVID-19 Emergency Transition to Remote Learning on Undergraduates' Math Anxiety, Journal of Humanistic Mathematics
 - https://scholarship.claremont.edu/jhm/vol112/iss1/11/?fbclid=IwAR0iTKKim08I0PSjBKJsNm_I3IPI2ypqxoCc90Vjq10P00WU7rwb4CwpXBI
- 2018, Generalized Moran Sets Generated By Step-Wise Adjustable Iterated Function Systems (Submitted)
 - <https://arxiv.org/abs/1707.08634>
- 2013, Website detailing work
 - <http://reu.dimacs.rutgers.edu/~tlazarus/>
- 2012, Analyzing the Cost of Graphs Relative to Tournaments
 - <http://www.units.muohio.edu/sumsri/sumj/2012/TOC12.html>
- 2011, Sandpiles on Bipartite Graphs
 - http://www2.hawaii.edu/~pure/PURE_Math/2011.html

POSTERS, PRESENTATIONS, AND CONFERENCES

- July 2023, Teaching Math Modeling Workshop, Harvard
- November 2020, Math Instruction Colloquium - *Teaching & Learning Practices in Response to Student Math Anxiety (Results from Spring 2020 COVID-19 Emergency Transition)*
- December 2019, Panelist for Math 597T on teaching and TAing
- October 2017, Math/Applied Math Seminar - *Fractals from Stepwise-Adjustable Iterated Function Systems*
- October 2013, SACNAS National Conference - Poster Presentation
- September 2013, University of Hawaii at Hilo - *An Introduction to Tournament Theory*
- April 2013, University of Hawaii at Hilo - *Seeing Through the Lies: A look at Lie Groups and the Iwasawa Decomposition of $SL_2(\mathbb{R})$*
- February 2013, ALEX Research Conference - *An Introduction to Tournament Theory*
- January 2013, Joint Mathematics Meeting - Poster Presentation
- November 2012, University of Hawaii at Hilo - *An Introduction to Tournament Theory*
- July 2012, Miami University - *Analyzing the Cost of Graphs Relative to Tournaments*
- July 2011, University of Hawaii at Hilo - *Sandpiles on Bipartite Graphs*

AWARDS, HONORS AND SERVICE

- 2022-24 Elected to College of Science Faculty Council (UA)
- 2021-22 Elected to Climate, Diversity, Equity, and Inclusion Committee (UA)
- 2020- Mentor for the Undergraduate Teaching Assistant program (UA)
- 2019- Graduate student Teaching Advisor (UA)
- 2018-19 Galois Group Vice President (UCD)
- 2018 Organizer of Picnic Day Mathematics Table (UCD)

- 2018 Certificate of completion for the *Seminar on College Teaching* (UCD)
- 2017 Certificate of completion for *Foundation in Teaching* workshop series (UCD)
- 2017-18 Undergraduate Program Committee representative (UCD)
- 2016 Henry L. Alder Prize for Excellence in Teaching (UCD)
- 2015-16 Treasurer of UC Davis chapter of Association for Women in Mathematics (UCD)
- 2015-16 Graduate Student Association representative (UCD)
- 2014 Modern Math travel scholarship recipient to attend SACNAS National Conference
- 2012 & 2013 Putnam Exam participant and school team member, Score: 10
- 2011-2013 SACNAS travel scholarship recipient
- 2012-13 & 2013-14 Recipient of College of Arts and Sciences Dean's List scholarship (UHH)
- All eight consecutive semesters on Dean's List (UHH)
- Eagle Scout of BSA Troop 294

PROGRAMMING

- Website: <https://www.math.arizona.edu/~tlazarus/index.html>
- Working Knowledge of LaTeX, Sage, Python, Matlab, MS Office, WebAssign