L. MARIZZA A. STIX
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EDUCATION

PhD | Mathematics Education Arizona State University, Tempe   (expected 2026)
    Advisor: Dr. Dov Zazkis

M.A.| Mathematics Education Arizona State University, Tempe   2024
    Advisor: Dr. Dov Zazkis
    Honors*: with distinction*

M.S.| Pure Mathematics, University of California, Irvine
    <u>PhD Advisor:</u> Professor Michael Fried   2002
    <u>Areas of Concentration:</u> Arithmetic Geometry
    <u>Qualifying Exams passed at PhD level:</u>
    Abstract Algebra, Real Analysis, Complex Analysis

B.S.| Pure Mathematics, University of California, Irvine   1998

Publications

Journal Articles

Zazkis, D. & **Stix, L. M. (**2025) Students' guided reinvention of direct proof and proof by cases. *Problems, Resources, and Issues in Undergraduate Studies.*1-15.

Eaton, C., & **Bailey, L.** (2018). Revealing Luz: Illuminating Our Identities Through Duoethnography. *Journal of Humanistic Mathematics*, 8(2), 60–89. https://doi.org/10.5642/jhummath.201802.08

Articles in Review

Bailey, L. M., & Zazkis, D. (under review). Navigating through levels of abstraction. *Educational Studied in Mathematics.* Submitted October 2023.

Refereed Conferences

Bailey, L. M., (2024) Zazkis, D., & Mirin, A. Moving Between Abstraction Levels by Linking Recursion and Induction. *Proceedings of the 26th Annual Conference on Research in Undergraduate Mathematics Education. Omaha, NE.*

Bailey, L. M., & Zazkis, D. (2024)The Recursion-Induction Connection: A Pathway for Transferring Levels of Abstraction. *15th International Congress on Mathematical Education (ICME-15)*

UNIVERSITY TEACHING EXPERIENCE

2023-present

Instructor of Record, Arizona State University

Multivariable Calculus (MAT 267)
Pathways Precalculus (MAT 170)

Instructor of Record, University of California, Irvine0

Precalculus (Math 1B)
Vector Calculus (Math 2D)   1999-2002
Linear Algebra (Math 3A)
Group Theory (Math 120A)

Teaching Assistantship, University of California, Irvine   1997-2003

Calculus I (Math 2A)
Calculus II (Math 2B)
Vector Calculus (Math 2D)
Linear Algebra (Math 2J, Math 3A)
Boolean Algebra (Math 6A, 6B)
Group theory (Math 120A)
Ring Theory (Math 120B)
Linear Algebra Theory (Math 121A, B)
Graduate Abstract Algebra (Math 206)

SECONDARY TEACHING EXPERIENCE

Great Hearts North Phoenix Preparatory Academy, Phoenix   2019-2022

Mathematics Instructor for High School
Courses taught: *Algebra 2 with Trigonometry, Calculus I, Calculus II, Logic and Coding*
Mathematics Lead for grades 7 - 12
Observed and mentored all mathematics teachers
Mathematics Interventionist for grades 7 - 12
Designed and Implemented Math Intervention Program

BASIS Scottsdale   2010-2019

Mathematics Instructor for 7-12 grades
Courses Taught: *Algebra 2, Precalculus, Calculus (Honors), AP Calculus AB, AP Calculus BC, Linear Algebra, Vector Calculus, Introduction to Category Theory, Complex Analysis, History of Mathematics, Mathematics Investigation, Introduction to Programing*
Courses Designed: *Linear Algebra, Vector Calculus, Introduction to Category Theory, Complex Analysis, History of Mathematics, Mathematics Investigation, Introduction to Programing*
Mathematics Teacher Advisor: Observed and mentored all mathematics teachers

BASIS Educational Ventures LLC
Curriculum and Content Consultant for Algebra 2 Textbook   2017-2019
Scope of Work:
Create and Review content Algebra 2, Precalculus and Calculus textbooks
Discussed and reviewed proposed changes to the BASIS math curriculum
Reviewed newly created Algebra 2, Precalculus, and Calculus content
Consulted on topics related to all of the BASIS math curriculum.

BASIS Educational Group   2011-2018

Post-Calculus Capstone Curriculum Developer:
District-wide Mathematics Teacher Trainer and Mentor
Mathematics Assessment Specialist
Mathematics Content Subject Advisor
Mathematics Assessment Question Advisor

Arkansas School of Mathematics, Sciences, and the Arts   2005-2009

Mathematics Instructor
Courses Taught: *Geometry, Algebra 2, Trigonometry, AP Calculus AB, AP Calculus BC, Introduction to Category Theory, Complex Analysis*
Courses Designed: *Introduction to Category Theory, Complex Analysis*

AWARDS

MIT Inspirational Teacher Award	2021
Stanford Terman Award	2021
Northwestern Distinguished Teacher Award Finalist	2018
Presidential Award for Excellence in Secondary Teaching *$10,000 personal stipend*	2015
Intel Science Talent Search (STS) Teacher Mentor *Awarded Minor Planet 30348 named Marizzabailey*	2015
Raytheon Math Hero Award *$2500 personal stipend and $2500 grant for school*	2012
UCI Mathematics Doctoral Diversity Fellowship: *Paid one full year of graduate school without teaching assistantship.*	1998

GRANTS

Alhambra Mini-Grant *Bringing Geometry to Life*:	$500	2010
Wells Fargo Teacher Partners Program Grant *Resources and Technology for Underprivileged Students*	$954	2010
National Council of Teachers of Mathematics *Connecting Mathematics to Other Subject Areas:* Robotics in Mathematics	$3329	2010

TEACHING CERTIFICATIONS

Arkansas Standard Teaching Certification	2008 - 2012
National Board Certification	2009 - 2019

RELATED EXPERIENCE

NSF | Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST)

PAEMST Reviewer and Panelist Member	2016 -2018

College Board

AP Reader for AP Calculus AB/BC	2017 – 2020

LEADERSHIP AND SERVICE

SACNAS

Marketing Director	2024 - present
ASU Recruiter at National Conference	2023 - 2024

NSF | Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST)

Mentor for PAEMST Candidates	2016 – 2019

National Board for Professional Teaching Standards (NBPTS)

Mentor for NBPTS Candidates	2011-2014

STRIVE Teacher Internship

Arc Flash Analyst for Arkansas Army Corps of Engineers	2008

Blakely, DeGray, Narrows Hydroelectric Plants:
Analyzed electrical components at three large hydroelectric plants in Arkansas to compute incident energy, and arc flash protection boundary for worker safety.

Arkansas School of Mathematics, Sciences, and the Arts

Designed and Implemented Math Camp for Incoming Students	2006-2008

Arkansas Mathematics Teacher Workshop

Designed and Implemented Geometry Teacher Workshop	2006-2009

Geometry Activities for the Geometry Classroom: Aligned with Standards

PRESENTATIONS

Arizona Association of Teachers of Mathematics Conference	2021

Investigations in Math: Using Graph Theory for Low Hanging Fruit

National Consortium of Specialized Secondary Schools for Mathematics, Sciences and Technology	2007

Teaching Introduction to Set-Based Categories in High School

Arkansas Conference of Teachers of Mathematics – Curriculum Conference	2006, 2008

Geometry Activities for Discovering Geometry in the Classroom