

# ELAINA ACEVES

Department of Mathematics, The University of Utah  
elaina.aceves@utah.edu  
www.elainaaceves.weebly.com

---

EDUCATION	<b>PhD in Mathematics</b> , The University of Iowa Dissertation: <i>Train tracks of pseudo-Anosov 3-braids and non-degenerate flype</i> Advisor: Keiko Kawamuro	May 2022
	<b>Masters of Science in Mathematics</b> , The University of Iowa	May 2018
	<b>Masters of Arts in Mathematics</b> , Traditional Track, California State University, Fresno Thesis: <i>A Study of Projections of 2-Bouquet Graphs</i> Advisor: Carmen Caprau	May 2016
	<b>Bachelor of Arts in Mathematics</b> , California State University, Fresno	May 2014
CERTIFICATIONS	<b>Certificate in Online Teaching</b> The University of Iowa	Spring 2022
	<b>Graduate Certificate in College Teaching</b> The University of Iowa	Fall 2020
EMPLOYMENT	<b>Instructor (postdoc)</b> The University of Utah	Fall 2022-present
	<b>Instructor or TA</b> The University of Iowa	Fall 2018-Spring 2021
	<b>Instructor</b> California State University Fresno	Summer 2014-Spring 2016
PUBLICATIONS	<b>Agol cycles of pseudo-Anosov 3-braids</b> (with K. Kawamuro), <i>Geometriae Dedicata</i> , Volume 217, No. 5 (2023).	
	<b>Comparing Bennequin-type inequalities</b> (with K. Kawamuro and L. Truong), <i>New York Journal of Mathematics</i> , Volume 27, 124-140 (2021).	
	<b>A study of projections of 2-bouquet graphs</b> , <i>Journal of Knot Theory and its Ramifications</i> , Volume 26, No. 5 (2017).	
	<b>On invariants for spatial graphs</b> (with J. Elder), <i>Rose-Hulman Undergraduate Mathematics Journal</i> , Volume 16, Issue 2, Article 1 (2015).	
	<b>Cycles in projective spaces</b> (with D. Heywood, A. Klahr, and O. Vega). <i>Journal of Geometry</i> , 105, 111-117 (2014).	
EXPOSITORY PUBLICATIONS	<b>Fellowships, grants, and awards: advice from award recipients</b> , <i>AMS Math Grad Blog Post</i> (September 18, 2019).	
	<b>Mathematics conferences</b> , <i>Math Horizons</i> , Volume XXIII, Issue 1 (September 2015).	

TEACHING  
EXPERIENCE

**The University of Utah, Instructor of Record**

Math 1030: Quantitative Reasoning, 2 sections Spring 2024  
 Math 1090: Business Algebra, 1 section Spring 2024  
 Math 1050: College Algebra, 1 section Fall 2023  
 Math 1080: Precalculus, 1 section Fall 2023  
 Math 1090: Business Algebra (online), 1 section Summer 2023  
 Math 1080: Precalculus, 2 sections Spring 2023  
 Math 1030: Quantitative Reasoning, 2 sections Fall 2022  
 Math 1220: Calculus II, 1 section Fall 2022

**The University of Iowa, Instructor of Record**

Math 1460: Calculus for the Biological Sciences, 1 section Summer 2021  
 Math 1005: College Algebra, 1 section Fall 2020

**The University of Iowa, Teaching Assistant**

Math 1860: Calculus II, 2 sections Spring 2021  
 Math 1850: Calculus I, 2 sections Fall 2019  
 Math 1560: Engineering Math II: Multivariable Calculus, 1 section Fall 2018

**The University of Iowa, Practica**

Math 3770: Fundamental Properties Spaces/Funct I Fall 2020  
 Math 1560: Engineering Math II: Multivariable Calculus Fall 2019

**California State University, Fresno, Head Instructor**

Math 1RB: Developmental Math II Spring 2016  
 Math 1RA: Developmental Math I Fall 2015  
 Summer Bridge Math Summer 2015

**California State University, Fresno, Instructor of Record**

Math 1RB: Developmental Math II, 1 section Spring 2016  
 Math 1RA: Developmental Math I, 1 section Fall 2015  
 Summer Bridge Math, 1 section Summer 2015  
 Math 1RB: Developmental Math II, 2 sections Spring 2015  
 Math 1RA: Developmental Math I, 1 section Fall 2014  
 Summer Bridge Math, 1 section Summer 2014  
 Early Start Math, 1 section Summer 2014

HONORS, AWARDS,  
AND SCHOLARSHIPS

**Ford Foundation Predoctoral Fellowship**

National Academies of Sciences, Engineering, and Medicine 2018–2022

**Math Alliance Scholar**

The University of Iowa, California State University, Fresno 2014–2022

**Alfred P. Sloan Scholar**

The University of Iowa 2016–2021

**Graduate College Recruitment Fellowship**

The University of Iowa 2016–2021

**Graduate Assistance in Areas of National Need Fellowship**

The University of Iowa 2016–2018

**Underrepresented Minority Pre-Comprehensive Exam Men-  
tored Research Fellowship**

The University of Iowa Spring 2018

	<b>Department of Mathematics' Outstanding Graduate Student</b>	2016
	Mathematics Department, California State University, Fresno	
	<b>Graduate Equity Fellowship</b>	2014–2016
	California State University Chancellor's Office	
	<b>Fresno State Tensor Women Scholar</b>	2012–2015
	MAA Tensor Women and Mathematics Grant	
	<b>President's Honors Scholarship</b>	2010–2014
	Smittcamp Family Honors College, California State University, Fresno	
	<b>Outstanding Presentation Award at Central California Research Symposium</b>	2013
	Office of Research and Sponsored Programs of California State University, Fresno	
MENTORING, OUTREACH, AND SERVICE	<b>The University of Utah</b>	
	Math Teacher Training Workshop Organizer and Facilitator	Summer 2023
	<b>The University of Iowa</b>	
	Sonia Kovalevsky Day Activity Leader	Spring 2022
	Panorama of Geometry and Topology # 3 Organizer	November 2021
	Kids Topology Club Organizer	Fall 2021
	Topic Session Organizer of Knots and Braids in Dimensions 3 and 3.5 Session in Nearly Carbon Neutral Geometry and Topology Conference (NCNGT)	June 2021
	Directed Reading Program Organizer	Spring 2021
	Virtual Grad Fair Volunteer at the Field of Dreams hosted by the Math Alliance and Partners	October 2020
	Directed Reading Program Organizer	Fall 2020
	Directed Reading Program Mentor in Knot Theory One student	Fall 2020
	Directed Reading Program Mentor in Graph Theory One student	Spring 2020
	Field of Dreams hosted by the Math Alliance and Partners Grad Fair Volunteer	November 2019
	Graduate and Professional Student Government Grant Reviewer for Travel and Research Grants	Fall 2019
	Directed Reading Program Mentor in Knot Theory One student	Fall 2019
	Topology Reading Seminar Organizer	Fall 2019
	Zoom webinar entitled "Personal Statements and Q & A with Ford Fellow Elaina Aceves" hosted by the Graduate College	August 2019

Sonia Kovalevsky Day Volunteer in charge of Career Panel	Spring 2019
Lucas Elementary Day Activity Leader	April 2019
Moderator in Q & A session entitled “Career Opportunities Outside Academia” at the Midwest Women in Mathematics Symposium	April 2019
Ford Fellows Workshop Panelist hosted by the Graduate College	August 2018
Sonia Kovalevsky Day Volunteer in charge of Career Panel	Spring 2017

**California State University, Fresno**

Sonia Kovalevsky Day Activity Leader	2013–2016
--------------------------------------	-----------

INVITED  
CONFERENCE AND  
SEMINAR TALKS

<i>Flypes and Agol Cycles of 3-braids</i>	April 2022
AWM Special Session on Women and Gender Minorities in Symplectic and Contact Geometry and Topology Joint Math Meetings	
<i>Agol cycles of flype admitting pseudo-Anosov 3-braids</i>	December 2021
Distinguished Graduate Student Speaker Knots in Washington 49.5	
<i>Introduction to Train Tracks</i>	October 2021
Department of Mathematics Colloquium Seminar California State University, Fresno	
<i>Agol Cycles of 3-braids</i>	September 2021
Early-Career Mathematicians Lightning Talks AWM We Speak! Monthly Virtual Talks Series	
<i>Reproving Birman and Menasco’s 3-braid Classification Theorem</i>	March 2021
AMS Special Session on Topology and Geometry of 3- and 4-manifolds AMS Southeastern Sectional Meeting	
<i>Flype, pseudo-Anosov braids and the fractional Dehn twist coefficient</i>	January 2021
AMS Special Session: Algebraic and Geometric Perspectives on Low-Dimensional Topology, I AMS/MAA Joint Math Meetings	
<i>Sequence of Undetectable Nonquasipositive Braids</i>	June 2020
Quantum Invariants and Low-Dimensional Topology Group Nearly Carbon Neutral Geometric Topology Conference (NCNGT)	
<i>Positivity of Knots</i>	April 2020
Underrepresented Students in Topology and Algebra Research Symposium (USTARS)	
<i>Extending the Definition of the Fractional Dehn Twist Coefficient</i>	March 2018
Jakobsen Conference	
<i>A Study of Bouquet Pseudograph Diagrams</i>	January 2016
AMS/MAA Joint Math Meetings	
<i>From Knot Theory to Pseudographs</i>	October 2015
AMS Fall Western Sectional Meeting	

<i>From Knot Theory to Pseudoknots</i> Graduate Research and Create Activities Symposium	May 2015
<i>Shhh...Can You Keep a Secret?</i> STEM Conference	April 2015
<i>Invariants for Spatial Graphs</i> Pacific Coast Undergraduate Conference	March 2014
<i>A Yang-Baxter model for specializations of the Kauffman polynomial</i> AMS/MAA Joint Math Meetings	January 2014
<i>Embedding Cycles in Projective Spaces</i> Plenary Session Central California Research Symposium	April 2013
<i>Invariants for Spatial Graphs</i> (with J. Elder) Pacific Coast Undergraduate Conference	March 2013
<i>Embedding Cycles in Projective Spaces</i> (with D. Heywood) Pacific Coast Undergraduate Conference	March 2013