

Sherilyn Tamagawa

610 North College Avenue, Claremont, CA 91711
sherilyn.tamagawa@pomona.edu
Office phone: 909-607-8012

Education

Ph.D. Mathematics with Certificate in College and University Teaching <i>University of California, Santa Barbara</i>	June 2019
M.A. Mathematics <i>University of California, Santa Barbara</i>	June 2016
B.A. Mathematics, honors <i>Scripps College</i>	May 2014

Relevant Employment

Pomona College Visiting Assistant Professor of Mathematics	Fall 2021 - present
Davidson College Visiting Assistant Professor of Mathematics and Computer Science	Fall 2019 - Spring 2021
Scripps College Instructor University of California, Santa Barbara	Fall 2017
Teaching Associate	Summer 2018, 2016
Lead Teaching Assistant	Fall 2018
Teaching Assistant	Fall 2014 - Spring 2019

Publications

1. P. Graves, S. Nelson, and S. Tamagawa, Niebrzydowski algebras and trivalent spatial graphs, *Internat. J. Math.* 29 (2018), no. 14, 1850102, 16 pp. [[arXiv:1805.00104](#)]
2. S. Nelson and S. Tamagawa, Quotient quandles and the fundamental Latin Alexander quandle, *New York J. Math.* **22** (2016), 251-263. [[arXiv:1404.6008](#)]

Preprints

1. T. Holmes, D. Kitsuwu, J.B. Nation, and S. Tamagawa, Lattices of atomic theories in languages without equality. In K. Adaricheva, J. Hyndman, J.B. Nation, J.N. Nishida, *A Primer of Subquasivariety Lattices* (pp. 275-280). Springer Canadian Math. Soc.
2. N. Scherich and S. Tamagawa, An invariant of virtual trivalent spatial graphs. [[arXiv:2104.03830](#)]

In Preparation

1. S. Tamagawa, *A new approach to the B_2 spider*.
2. S. Tamagawa, *The Infinitesimal Alexander Module and welded knots*.

Professional Development

MAA Project NExT	Silver 2019
AMS Mathematics Research Communities Quantum Symmetries: Subfactors and Fusion Categories	2018

Teaching Experience

Courses Taught at Pomona College

Calculus I (Math 30)	Fall 2021
Calculus III (Math 32)	Fall 2021

Courses Taught at Davidson College

History of Mathematics (MAT 380)	Spring 2021
Sets and Proofs (MAT 230)	Spring 2021
Discrete Structures (CSC 220)	Fall 2020
Linear Algebra (MAT 150)	Fall 2020
Topology (MAT 360)	Spring 2020
Linear Algebra (MAT 150)	Spring 2020
Calculus I and Modeling (MAT 112)	Fall 2019
Sets and Proofs (MAT 230)	Fall 2019

Courses Taught at Scripps College

Calculus I (Math 30)	Fall 2017
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Courses Taught at UC Santa Barbara

Calculus for Life and Social Sciences II (Math 34B)	Summer 2018
Calculus and Applications II (Math 3B)	Summer 2016

Courses at UC Santa Barbara (Teaching Assistant)

Advanced Linear Algebra	Spring 2019
Advanced Linear Algebra	Winter 2019
Transition to Higher Mathematics	Fall 2018
Calculus for Life and Social Sciences II	Spring 2018
Calculus for Life and Social Sciences I	Winter 2018
Introduction to Advanced Linear Algebra	Fall 2017
Linear Algebra	Summer 2017
Introduction to Advanced Linear Algebra	Winter 2017
Introduction to Advanced Linear Algebra	Fall 2016
Calculus and Applications I	Fall 2015
Linear Algebra	Summer 2015
Inquiry Based Differential Equations (temporary)	Winter 2015
Calculus for Life and Social Sciences I	Fall 2014

Courses at UC Santa Barbara (Reader)

History of Mathematics	Spring 2018
Transition to Higher Mathematics	Winter 2018
History of Mathematics	Spring 2017
Transition to Higher Mathematics	Fall 2016
Transition to Higher Mathematics	Spring 2016

Kawanakoa Middle School

Temporary Part-Time Teacher (7th Grade Math)	Summer 2013
Math Team Coach	Spring 2010

Chaminade University Summer Bridge Program

Math and English Tutor	Summer 2012
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Presentations

Research Presentations

- Virtual Niebrzydowski Algebras and Trivalent Spatial Graphs* January 2021
 The EDGE Program: Pure and Applied talks by Women Math Warriors,
 Joint Mathematics Meetings online
- The Cobweb Interpretation of the B_2 Spider* January 2021
 Women of Color in Topology and Algebra, Joint Mathematics Meetings
- From ACMs to IAMs: My Mathematical Research Journey* Canceled (COVID-19)
 San Diego State University REU
- Virtual Niebrzydowski Algebras and Trivalent Spatial Graphs* January 2020
 Women in Topology, Joint Mathematics Meetings Denver
- Niebrzydowski Algebras and Trivalent Spatial Graphs* April 2019
 USTARS Distinguished Graduate Student talk, Iowa State University
- Welded knots and the Infinitesimal Alexander Module* January 2019
 The EDGE Program: Pure and Applied talks by Women Math Warriors,
 Joint Mathematics Meetings Baltimore
- Niebrzydowski Algebras and Trivalent Spatial Graphs* January 2019
 Low-Dimensional Manifolds, Joint Mathematics Meetings Baltimore
- w-Knots and the Infinitesimal Alexander Module* April 2018
 USTARS parallel sessions, Reed College
- w-Knots and the Infinitesimal Alexander Module* July 2017
 Math Summer Research Program for Undergraduates, UC Santa Barbara
- Quandles of Virtual Knots* April 2017
 USTARS parallel sessions, Amherst College
- The Catenary Degree: A Combinatorial Non-Unique Factorization Invariant* November 2016
 Discrete Geometry and Combinatorics Seminar, UC Santa Barbara
- Quandles of Virtual Knots* March 2015
 Algebra and Combinatorics Seminar, Texas A&M University

Expository Presentations

- The Algebra of Knots and Their Friends* March 2021
 Berry College Mathematics Seminar
- Knots, Quandles, and Friends* March 2019
 Math/CS Coffee, Davidson College
- Quandles and Friends* April 2018
 Quantum Topology and Algebra Seminar, UC Santa Barbara
- Mathematical Braids* April 2017
 POWERS Math Day, UC Santa Barbara
- The Factorization Structure of 3-Manifolds* February 2017
 WiMSoCal Symposium, University of Southern California

Math Education Seminars

- Understanding Academic Dishonesty* April 2017
 Teaching and Learning Seminar, UC Santa Barbara
- Computer Programming Assignments* October 2016
 Teaching and Learning Seminar, UC Santa Barbara

Posters

- Quandles of Virtual Knots* January 2015
 Undergraduate Poster Session, Joint Mathematics Meetings San Antonio
- Quandles of Virtual Knots* May 2014
 Scripps College Capstone Day
- Exploring the Catenary Degree of Arithmetical Congruence Monoids* January 2014
 Undergraduate Poster Session, Joint Mathematics Meetings Baltimore
- Exploring the Catenary Degree of Arithmetical Congruence Monoids* September 2013
 Student Poster Session, Claremont Colleges Consortium

Conference Participation

Mathfest, virtual	August 2021
USTARS, virtual	April 2021
Joint Mathematics Meetings, virtual	January 2021
NE Conference for Undergrad. Women in Math., U. of Nebraska-Lincoln	January 2020
Joint Mathematics Meetings, Denver	January 2020
MathFest, Cincinnati	August 2019
USTARS, Iowa State University	April 2019
Joint Mathematics Meetings, Baltimore	January 2019
Biology and Mathematics in the Bay Area (BaMBA), Stanford University	November 2018
MAA Southern California-Nevada Section Meeting, Scripps College	October 2018
USTARS, Reed College	April 2018
Joint Mathematics Meetings, San Diego	January 2018
USTARS, Amherst College	April 2017
WiMSoCal, University of Southern California	March 2017
Joint Mathematics Meetings, Atlanta	January 2017
Joint Mathematics Meetings, Seattle	January 2016
Joint Mathematics Meetings, San Antonio	January 2015
Joint Mathematics Meetings, Baltimore	January 2014
AMS Fall Western Sectional Meeting, UC Riverside	November 2013
SACNAS, San Antonio	October 2013

Service

Academic Service

- Conference Co-Organizer
 - USTARS, Fall 2019 - present
- Co-advisor for Women in Mathematics Group
 - Davidson College, Fall 2019 - present
- Peer Referee
 - SIAM Journal on Discrete Mathematics
 - Journal of Knot Theory and Its Ramifications
- Hypatian Seminar Co-Organizer
 - UC Santa Barbara, Fall 2014 - Spring 2019
- Directed Reading Program Mentor
 - UC Santa Barbara, Winter 2019 - Spring 2019
- Workshop Leader for "Leading Diverse STEM Discussion Sections"
 - UC Santa Barbara Campus-Wide TA Orientation, September 2018
- Graduate Program Representative for UCSB Mathematics Department
 - Joint Mathematics Meetings Graduate School Fair, 2015-2019
- Graduate Student Peer Mentor
 - UC Santa Barbara, Fall 2015-2019

Panels

- Graduate School and Beyond
 - Association for Women in Mathematics, UC Santa Barbara, April 2018
- Graduate Student Panel
 - Math 94, UC Santa Barbara, November 2016
- Experienced TA Panel
 - TA Training, UC Santa Barbara, September 2016

Outreach

- Math Activity for Girls Inc.
 - UC Santa Barbara, March 2017

Non-Academic Service

Consultant on *The Angry Birds Movie 2*

2018-2019

Honolulu Sertoma Club member

September 2016-present

Honolulu Sertoma Club VP of Membership

July 2017 - August 2018

Awards and Recognitions

Research Awards and Honors

Distinguished Graduate Student Speaker, USTARS 2019

Mathematics Competitions

Putnam 2013 Score: 19

Putnam 2012 Score: 21

Putnam 2011 Score: 1

Putnam 2010 Score: 10