

## Sherilyn K. Tamagawa

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### Education

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University of California, Santa Barbara	
Ph.D. Mathematics	June 2019
with Certificate in College and University Teaching	
M.A. Mathematics	June 2016
Scripps College	
B.A. Mathematics (honors, cum laude)	May 2014

### Relevant Employment

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

### Publications

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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](https://arxiv.org/abs/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](https://arxiv.org/abs/1404.6008)]

### In Preparation

1. S. Tamagawa, *A new approach to the  $B_2$  spider*.
2. S. Tamagawa, *The Infinitesimal Alexander Module and welded knots*.
3. N. Scherich and S. Tamagawa, *Virtual Niebrzydowski algebras and trivalent spatial graphs*.

### Professional Development

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

### Teaching Experience

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#### Courses Taught at Davidson College

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	Summer 2018
Calculus and Applications II	Summer 2016
<b>Courses at UC Santa Barbara (Teaching Assistant)</b>	
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
<b>Courses at UC Santa Barbara (Reader)</b>	
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
<b>Kawanakoa Middle School</b>	
Temporary Part-Time Teacher (7th Grade Math)	Summer 2013
Math Team Coach	Spring 2010

## Presentations

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### Research Presentations

<i>Virtual Niebrzydowski Algebras and Trivalent Spatial Graphs</i>	January 2020
Women in Topology, Joint Mathematics Meetings Denver	
<i>Niebrzydowski Algebras and Trivalent Spatial Graphs</i>	April 2019
USTARS Distinguished Graduate Student talk, Iowa State University	
<i>Welded knots and the Infinitesimal Alexander Module</i>	January 2019
The EDGE Program: Pure and Applied talks by Women Math Warriors, Joint Mathematics Meetings Baltimore	
<i>Niebrzydowski Algebras and Trivalent Spatial Graphs</i>	January 2019
Low-Dimensional Manifolds, Joint Mathematics Meetings Baltimore	
<i>w-Knots and the Infinitesimal Alexander Module</i>	April 2018
USTARS parallel sessions, Reed College	
<i>w-Knots and the Infinitesimal Alexander Module</i>	July 2017
Math Summer Research Program for Undergraduates, UC Santa Barbara	
<i>Quandles of Virtual Knots</i>	April 2017
USTARS parallel sessions, Amherst College	
<i>The Catenary Degree: A Combinatorial Non-Unique Factorization Invariant</i>	November 2016
Discrete Geometry and Combinatorics Seminar, UC Santa Barbara	
<i>Quandles of Virtual Knots</i>	March 2015
Algebra and Combinatorics Seminar, Texas A&M University	

**Expository Presentations**

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

**Math Education Seminars**

<i>Understanding Academic Dishonesty</i>	April 2017
Teaching and Learning Seminar, UC Santa Barbara	
<i>Computer Programming Assignments</i>	October 2016
Teaching and Learning Seminar, UC Santa Barbara	

**Posters**

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

**Conference Participation**

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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**

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**Academic Service**

Conference Co-Organizer
USTARS, Fall 2019- present
Peer Referee
SIAM Journal on Discrete Mathematics
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**

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### **Mathematics Competitions**

Putnam 2013 Score: 19

Putnam 2012 Score: 21

Putnam 2011 Score: 1

Putnam 2010 Score: 10