

POSITIONS	Ross Assistant Professor The Ohio State University	Fall 2025 - present
EDUCATION	University of California, Santa Barbara Ph.D. in Mathematics , Advisor: Stephen Bigelow Thesis: <i>Skein Theory of Affine ADE Subfactor Planar Algebras</i> Certificate in College and University Teaching University of Oklahoma M.A. in Mathematics University of California, Davis B.S. in Mathematics	Fall 2019 - Spring 2025 Fall 2014 - Spring 2017 Fall 2010 - Spring 2014
PAPERS	<p>4. A Mirror Deformation of Markov Numbers with Léa Bittmann, Perrine Jouteur, Ezgi Kantarcı Oğuz, and Emine Yıldırım <i>Preprint on arXiv.</i> arxiv.org/abs/2602.14802</p> <p>3. A Well-Defined Jellyfish Algorithm for the Affine E_7 Subfactor Planar Algebra <i>Submitted.</i> arxiv.org/abs/2601.09003</p> <p>2. Skein Theory of Affine A Subfactor Planar Algebras <i>Submitted.</i> arxiv.org/abs/2410.05519</p> <p>1. A Determinant Formula of the Jones Polynomial for a Family of Braids with Derya Asaner, Sanjay Kumar, Andrew Pease, and Anup Poudel <i>Submitted.</i> arxiv.org/abs/2408.13410</p>	
RESEARCH INTERESTS	Quantum algebra, low-dimensional topology, operator algebras, tensor categories, diagrammatic algebras, subfactors, knot theory, quantum groups, C^* -algebras, quantum topology, representation theory	
AWARDS	<p>USTARS Distinguished Graduate Student Speaker in Topology 2024</p> <p>Decolvenaere Research Accelerator Award, UCSB Graduate Division 2023</p> <p>Individualized Professional Skills (IPS) Grant, UC Santa Barbara 2023</p> <p>Math Department Graduate Fellowship, University of Oklahoma 2015</p> <p>Richard V. Andree Memorial Scholarship, University of Oklahoma 2015</p> <p>Yueh-Jing Lin Fund, UC Davis 2013</p>	
MENTORSHIP	<p>UCSB Directed Reading Program Mentor REU Graduate Mentor, UCSB Women in STEM Mentor, UCSB</p>	December 2019 - June 2023 June 2022 - August 2022 September 2019 - June 2022
SERVICE	<p>Operator Algebra Mentor Network Mentee Board Member AMS 2025 Fall Eastern Virtual Sectional Special Session Co-Organizer Topology Seminar Co-Organizer AWM Student Chapter at UCSB, Secretary AWM EvenQuads 3 Data Collector Directed Reading Program at UCSB Co-Organizer Graduate Quantum Algebra and Topology Seminar Co-Organizer, UCSB AWM Chapter at UCSB Founder and President Quantum Algebra and Topology Seminar Co-Organizer, UCSB AWM Essay Contest Judge Math Teacher's Circle - Oklahoma City Founder and Instructional Leader</p>	September 2025 - present February 2025 - October 2025 October 2024 - June 2025 June 2023 - June 2025 June 2024 December 2020 - July 2023 July 2023 - January 2024 August 2022 - June 2023 September 2021 - June 2022 January 2020 - March 2020 April 2015 - June 2017
TALKS *=INVITED	<p>*36. UNCW Algebra and Number Theory Seminar; University of North Carolina Wilmington; Wilmington, North Carolina <i>NIM-Representations of Tambara-Yamagami Extensions</i></p>	February 2026

*35. Banff International Research Station Workshop; New Developments in Tensor Categories; Virtual <i>A Well-Defined Jellyfish Algorithm for Affine E Subfactor Planar Algebras</i>	January 2026
*34. Joint Mathematics Meetings; Recent Progress in Quantum Topology Special Session; Walter E. Washington Convention Center; Washington DC <i>A Well-Defined Jellyfish Algorithm for Affine E Planar Algebras</i>	January 2026
*33. Joint Mathematics Meetings; Recent Developments by Women in Mathematical Physics Special Session; Walter E. Washington Convention Center; Washington DC <i>Fusion Categories Arising from Affine A Planar Algebras</i>	January 2026
*32. Banff International Research Station Workshop; Operator Algebraic Quantum Groups; Banff, Canada <i>A Well-Defined Jellyfish Algorithm for Affine E Subfactor Planar Algebras</i>	December 2025
*31. West Coast Operator Algebra Seminar; Pomona College; Claremont, California <i>A Well-Defined Jellyfish Algorithm for Affine E Subfactor Planar Algebras</i>	December 2025
*30. European Quantum Algebra Lectures; Virtual; Hosted by Cardiff University and University of Nottingham <i>Skein Theory of Affine ADE Subfactor Planar Algebras</i>	November 2025
*29. East Coast Operator Algebras Seminar; University of Nebraska - Lincoln; Lincoln, Nebraska <i>Subfactor Planar Algebras at Index 4</i>	October 2025
28. Young Mathematicians in C* Algebras; University of Southern Denmark, Odense, Denmark <i>Subfactor Planar Algebras of Type Affine E7</i>	July 2025
*27. AWM Research Symposium; Non-commutative algebras, tensor categories, and diagrams Special Session; University of Wisconsin-Madison, Madison, Wisconsin <i>Diagrammatics of Index 4 Subfactor Planar Algebras</i>	May 2025
*26. AMS Spring Western Sectional Meeting; Knot Theory and Quantum Topology Special Session; California Polytechnic State University; San Luis Obispo, California <i>Diagrammatics of Index 4 Subfactor Planar Algebras</i>	May 2025
25. Women in Noncommutative Algebra and Representation Theory 4; Banff International Research Station, Banff, Canada <i>Planar Algebras and their Corresponding Categories</i>	March 2025
24. Quantum Groups, Tensor Categories and Quantum Field Theory Workshop; University of Oslo, Oslo, Norway <i>Index 4 Subfactor Planar Algebras and Their Corresponding Categories</i>	January 2025
*23. Joint Mathematics Meetings; Knots, 3-manifolds, and Their Invariants Special Session; Seattle Convention Center; Seattle, Washington <i>A determinant formula of the Jones Polynomial for a family of braids</i>	January 2025
22. Joint Mathematics Meetings; Advances in Operator Algebras Special Session; Seattle Convention Center; Seattle, Washington <i>Using Diagrams to Describe Quantum Symmetries and Subfactors</i>	January 2025
*21. AMS Western Sectional Meeting; Graphical Calculus in Representation Theory and Low-Dimensional Topology Special Session; University of California, Riverside; Riverside, California <i>Index 4 Subfactor Planar Algebras and Their Corresponding Categories</i>	October 2024
20. Quantum Groups and Representation Theory; North Carolina State University, Raleigh, North Carolina <i>Index 4 Subfactor Planar Algebras and their Corresponding Categories</i>	October 2024
19. Young Mathematicians in C Algebras; University of Glasgow; Glasgow, Scotland <i>Using Diagrams to Describe Quantum Symmetries of Subfactors</i>	August 2024

18. Oberwolfach Seminar ; Classification of C-Algebras and Dynamics Seminar; Oberwolfach Research Institute for Mathematics; Oberwolfach, Germany	May 2024
<i>Nuclear Dimension of Cuntz-Pimsner Algebras of C*-Correspondences</i>	
17. Banff International Research Station Workshop ; Skew Braces, Braids, and the Yang-Baxter Equation; Banff International Research Station; Banff, Canada	May 2024
<i>Skein Theory of Subfactor Planar Algebras</i>	
*16. USTARS Distinguished Graduate Student in Topology Speaker ; Underrepresented Students in Topology and Algebra Research Symposium; University of Iowa; Iowa City, Iowa	April 2024
<i>Using Diagrams to Describe Quantum Symmetries of Subfactors</i>	
15. Graduate Student Topology and Geometry Conference ; Michigan State University; East Lansing, Michigan	April 2024
<i>Skein Theory for Index 4 Subfactor Planar Algebras</i>	
14. Southeastern Lie Theory Workshop ; Quantum Structures in Lie Theory; University of Virginia; Charlottesville, Virginia	March 2024
<i>Skein Theory for Index 4 Subfactor Planar Algebras</i>	
13. Women in Mathematics in Southern California Symposium ; Pomona College; Claremont, California	February 2024
<i>Using Diagrams to Describe Quantum Symmetries of Subfactors</i>	
*12. Joint Mathematics Meetings ; Knots, Skein Modules, and Categorification Special Session; Moscone Center; San Francisco, California	January 2024
<i>Skein Theory of Index 4 Subfactor Planar Algebras</i>	
*11. Claremont Topology Seminar ; Pomona College; Claremont, California	November 2023
<i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	
10. Twinned Conference on C-Algebras and Tensor Categories ; Fields Institute; in person in Toronto, Canada; and International Centre for Mathematical Sciences; streamed live at Edinburgh, Scotland	November 2023
<i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	
9. Young Mathematicians in C*-Algebras ; KU Leuven; Leuven, Belgium	August 2023
<i>Skein Theory of Subfactor Planar Algebras</i>	
8. Great Plains Operator Theory Symposium ; The Ohio State University; Columbus, Ohio	May 2023
<i>Skein Theory for Index 4 Subfactor Planar Algebras</i>	
7. AMS Spring Western Sectional ; Algebraic Structures in Knot Theory Special Session; Fresno State University; Fresno, California	May 2023
<i>Diagrammatic Presentations of Affine Type A Subfactor Planar Algebras</i>	
6. Moab Topology Conference ; Utah State University, Moab; Moab, Utah	May 2023
<i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	
5. Redbud Topology Conference ; University of Oklahoma; Norman, Oklahoma	March 2023
<i>Skein Theory of Affine Type A Subfactor Planar Algebras</i>	
4. Underrepresented Students in Topology and Algebra Symposium ; University of Washington, Seattle, Washington	March 2023
<i>Diagrammatic Presentations of Index 4 Planar Algebras</i>	
*3. Quantum Groups Seminar ; On Zoom; Hosted by Université de Lille in Lille, France & University of Oslo in Oslo, Norway	March 2023
<i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	
2. Tech Topology Conference ; Georgia Institute of Technology; Atlanta, Georgia	December 2022
<i>Diagrammatic Presentations of Index 4 Subfactor Planar Algebras</i>	

**TEACHING
*=ONLINE
COURSE**

1. Topology Students Workshop ; Georgia Institute of Technology; Atlanta, Georgia	July 2022
<i>Diagrammatic Presentations of Affine Type A Subfactor Planar Algebras</i>	
Instructor of Record - The Ohio State University	Fall 2025 - present
*Math 1116 - Excursions in Mathematics	
Math 1131 - Calculus for Business	
Lead TA - UC Santa Barbara	Fall 2022 - Spring 2023
Provided professional development and training to new math department TAs	
Teaching Assistant - UC Santa Barbara	Fall 2019 - Spring 2025
MATH 111ABC - Abstract Algebra	
MATH 108AB - Introduction to Linear Algebra	
MATH 8 - Transition to Higher Mathematics	
*MATH 8 - Transition to Higher Mathematics	
*MATH 6AB - Vector Calculus	
MATH 34B - Calculus for Social and Life Sciences	
Associate Instructor - UC Santa Barbara	Summer 2020, 2021, 2024
MATH 4A - Linear Algebra with Applications	
*MATH 6A - Vector Calculus I	
*MATH 4A - Linear Algebra with Applications	
Adjunct Mathematics Professor - Cosumnes River College	Spring 2018 - Spring 2019
MATH 30 - Pre-Algebra	
STAT 300 - Introduction to Statistics and Probability	
MATH 20 - Arithmetic	
Teaching Assistant - University of Oklahoma	Fall 2015 - Spring 2017
MATH 1743 - Business Calculus I	
MATH 1914 - Calculus 1 (Fast Track)	
MATH 2924 - Calculus 2 (Fast Track)	
MATH 1823 - Calculus 1	
Instructor of Record - University of Oklahoma	Fall 2014 - Summer 2015 & 2016
MATH 1823 - Calculus 1	
MATH 1503 - College Algebra	
WORKSHOPS	
Oberwolfach Research Institute for Mathematics (MFO)	
Classification of C*-Algebras and Dynamics Seminar	May 2024
Banff International Research Station (BIRS)	
Operator Algebraic Quantum Groups	November 2025
Women in Noncommutative Algebra and Representation Theory 4	March 2025
Skew Braces, Braids, and the Yang-Baxter Equation Workshop	May 2024
Women in Operator Algebras 3	June 2023
American Institute of Mathematics (AIM)	
Quantum Invariants and Low-dimensional Topology	August 2023

TRAVEL GRANTS	National Science Foundation Travel Grant	2025
	AWM Symposium Travel Grant	2025
	GSA Conference Travel Grant, UC Santa Barbara	2025
	UCSB Doctoral Student Travel Grant	2024
	AMS Sectional Travel Grant	2024
	National Science Foundation Travel Grant	2024
	National Science Foundation Travel Grant	2024
	GSA Conference Travel Grant, UC Santa Barbara	2024
	National Science Foundation Travel Grant	2023
	Operator Algebra Mentor Network Grant	2023