

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	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 3. A Well-Defined Jellyfish Algorithm for the Affine E_7 Subfactor Planar Algebra <i>Submitted.</i> arxiv.org/abs/2601.09003 2. Skein Theory of Affine A Subfactor Planar Algebras <i>Submitted.</i> arxiv.org/abs/2410.05519 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	
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	USTARS Distinguished Graduate Student Speaker in Topology Decolvenaere Research Accelerator Award, UCSB Graduate Division Individualized Professional Skills (IPS) Grant, UC Santa Barbara Math Department Graduate Fellowship, University of Oklahoma Richard V. Andree Memorial Scholarship, University of Oklahoma Yueh-Jing Lin Fund, UC Davis	2024 2023 2023 2015 2015 2013
MENTORSHIP	UCSB Directed Reading Program Mentor REU Graduate Mentor, UCSB Women in STEM Mentor, UCSB	December 2019 - June 2023 June 2022 - August 2022 September 2019 - June 2022
SERVICE	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	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	*36. UNCW Algebra and Number Theory Seminar ; University of North Carolina Wilmington; Wilmington, North Carolina <i>NIM-Representations of Tambara-Yamagami Extensions</i>	February 2026

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

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

	1. Topology Students Workshop ; Georgia Institute of Technology; Atlanta, Georgia <i>Diagrammatic Presentations of Affine Type A Subfactor Planar Algebras</i>	July 2022
TEACHING *=ONLINE COURSE	Instructor of Record - The Ohio State University *Math 1116 - Excursions in Mathematics Math 1131 - Calculus for Business	Fall 2025 - present
	Lead TA - UC Santa Barbara Provided professional development and training to new math department TAs	Fall 2022 - Spring 2023
	Teaching Assistant - UC Santa Barbara 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	Fall 2019 - Spring 2025
	Associate Instructor - UC Santa Barbara MATH 4A - Linear Algebra with Applications *MATH 6A - Vector Calculus I *MATH 4A - Linear Algebra with Applications	Summer 2020, 2021, 2024
	Adjunct Mathematics Professor - Cosumnes River College MATH 30 - Pre-Algebra STAT 300 - Introduction to Statistics and Probability MATH 20 - Arithmetic	Spring 2018 - Spring 2019
	Teaching Assistant - University of Oklahoma MATH 1743 - Business Calculus I MATH 1914 - Calculus 1 (Fast Track) MATH 2924 - Calculus 2 (Fast Track) MATH 1823 - Calculus 1	Fall 2015 - Spring 2017
	Instructor of Record - University of Oklahoma MATH 1823 - Calculus 1 MATH 1503 - College Algebra	Fall 2014 - Summer 2015 & 2016
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