

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	2. Skein Theory of Affine A Subfactor Planar Algebras <i>Preprint on arXiv.</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
TRAVEL GRANTS	AWM Symposium Travel Grant GSA Conference Travel Grant, UC Santa Barbara UCSB Doctoral Student Travel Grant AMS Sectional Travel Grant National Science Foundation Travel Grant National Science Foundation Travel Grant GSA Conference Travel Grant, UC Santa Barbara National Science Foundation Travel Grant Operator Algebra Mentor Network Grant	2025 2025 2024 2024 2024 2024 2024 2023 2023
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	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	February 2025 - present 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

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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; Oberwolfach Research Institute for Mathematics; Oberwolfach, Germany May 2024
Nuclear Dimension of Cuntz-Pimsner Algebras of C-Correspondences*
17. **Banff International Research Station Workshop**; Skew Braces, Braids, and the Yang-Baxter Equation; Banff International Research Station; Banff, Canada May 2024
Skein Theory of Subfactor Planar Algebras
- *16. **USTARS Distinguished Graduate Student in Topology Speaker**; Underrepresented Students in Topology and Algebra Research Symposium; University of Iowa; Iowa City, Iowa April 2024
Using Diagrams to Describe Quantum Symmetries of Subfactors
15. **Graduate Student Topology and Geometry Conference**; Michigan State University; East Lansing, Michigan April 2024
Skein Theory for Index 4 Subfactor Planar Algebras
14. **Southeastern Lie Theory Workshop**; Quantum Structures in Lie Theory; University of Virginia; Charlottesville, Virginia March 2024
Skein Theory for Index 4 Subfactor Planar Algebras
13. **Women in Mathematics in Southern California Symposium**; Pomona College; Claremont, California February 2024
Using Diagrams to Describe Quantum Symmetries of Subfactors

*12. Joint Mathematics Meetings ; Knots, Skein Modules, and Categorification Special Session; Moscone Center; San Francisco, California <i>Skein Theory of Index 4 Subfactor Planar Algebras</i>	January 2024
*11. Claremont Topology Seminar ; Pomona College; Claremont, California <i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	November 2023
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 <i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	November 2023
9. Young Mathematicians in C*-Algebras ; KU Leuven; Leuven, Belgium <i>Skein Theory of Subfactor Planar Algebras</i>	August 2023
8. Great Plains Operator Theory Symposium ; The Ohio State University; Columbus, Ohio <i>Skein Theory for Index 4 Subfactor Planar Algebras</i>	May 2023
7. AMS Spring Western Sectional ; Algebraic Structures in Knot Theory Special Ses- sion; Fresno State University; Fresno, California <i>Diagrammatic Presentations of Affine Type A Subfactor Planar Algebras</i>	May 2023
6. Moab Topology Conference ; Utah State University, Moab; Moab, Utah <i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	May 2023
5. Redbud Topology Conference ; University of Oklahoma; Norman, Oklahoma <i>Skein Theory of Affine Type A Subfactor Planar Algebras</i>	March 2023
4. Underrepresented Students in Topology and Algebra Symposium ; University of Washington, Seattle, Washington <i>Diagrammatic Presentations of Index 4 Planar Algebras</i>	March 2023
*3. Quantum Groups Seminar ; On Zoom; Hosted by Université de Lille in Lille, France & University of Oslo in Oslo, Norway <i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	March 2023
2. Tech Topology Conference ; Georgia Institute of Technology; Atlanta, Georgia <i>Diagrammatic Presentations of Index 4 Subfactor Planar Algebras</i>	December 2022
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

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) Women in Noncommutative Algebra and Representation Theory 4 Skew Braces, Braids, and the Yang-Baxter Equation Workshop Women in Operator Algebras 3	March 2025 May 2024 June 2023
	American Institute of Mathematics (AIM) Quantum Invariants and Low-dimensional Topology	August 2023

REFERENCES	6. Stephen Bigelow, University of California, Santa Barbara, bigelow@math.ucsb.edu 5. David Penneys, The Ohio State University, penneys.2@osu.edu 4. Zhenghan Wang, University of California, Santa Barbara, zhenghwa@math.ucsb.edu 3. Noah Snyder, Indiana University Bloomington, nsnyder@gmail.com 2. Darren Long, University of California, Santa Barbara, long@math.ucsb.edu 1. Christopher Ograin, University of California, Santa Barbara, ograin@math.ucsb.edu (concerns teaching)
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