

Melody A.H. Molander

CONTACT INFORMATION		melodymolander[at]ucsb.edu melodymolander.com
EDUCATION	University of California, Santa Barbara Ph.D. in Mathematics (pursuing)	September 2019 - present
	University of Oklahoma M.A. in Mathematics	August 2014 - May 2017
	University of California, Davis B.S. in Mathematics	September 2010 - June 2014
PAPER	1. “Skein Theory of Index 4 Subfactor Planar Algebras” (in preparation)	
RESEARCH INTERESTS	Quantum Algebra, Low-dimensional Topology, Subfactors, Operator Algebras, Planar Algebras, Quantum Groups, Category Theory, Knot Theory	
AWARDS	National Science Foundation Travel Grant Awarded to graduate students to attend the Young Mathematicians in C*-Algebras (YMC*A) conference at KU Leuven.	2023
	Decolvenaere Research Accelerator Award - UC Santa Barbara Graduate Division Awarded to a top-ranked student with substantial research expenses in recognition of their outstanding research and academic work.	2023
	Individualized Professional Skills (IPS) Grant - UC Santa Barbara Awarded to graduate students to take greater agency in their own career path by funding exploration of a range of professional development opportunities across a variety of career and skill interests. The grant program also includes increased awareness of valuable experiences, career readiness, post-event follow through, and peer-to-peer networking.	2023
	Department of Mathematics Graduate Fellowship - University of Oklahoma Awarded to graduate students who make exceptional contributions to the mathematics department	2015
	Richard V. Andree Memorial Scholarship - University of Oklahoma Awarded to graduate students who have shown academic excellence, department and university citizenship, and activity in support of Pi Mu Epsilon	2015
	Yueh-Jing Lin Fund - UC Davis Awarded to high-achieving graduate or undergraduate students.	2013
INVITED TALKS	<i>TBD</i> Joint Mathematics Meetings, “Knots, Skein Modules, and Categorification” Special Session	January 2024
	<i>Skein Theory for Affine ADE Subfactor Planar Algebras</i> QGS: Quantum Groups Seminar (Zoom), Université de Lille & University of Oslo	March 2022
CONFERENCE TALKS	<i>Skein Theory for Index 4 Subfactor Planar Algebras</i> Great Plains Operator Theory Symposium, The Ohio State University	May 2023
	<i>Diagrammatic Presentations of Affine Type A Subfactor Planar Algebras of Index 4</i> AMS Spring Western Sectional, “Algebra Structures in Knot Theory” Session, Fresno State	May 2023
	<i>Skein Theory for Affine ADE Subfactor Planar Algebras</i>	May 2023

	Moab Topology Conference, Utah State University - Moab	
	<i>Skein Theory of Affine Type A Subfactor Planar Algebras</i> Redbud Topology Conference, University of Oklahoma	March 2023
	<i>Diagrammatic Presentations of Index 4 Planar Algebras</i> Underrepresented Students in Topology and Algebra Symposium, University of Washington	March 2023
	<i>Diagrammatic Presentations of Index 4 Subfactor Planar Algebras</i> Tech Topology Conference, Georgia Tech	December 2022
	<i>Diagrammatic Presentations of Affine Type A Subfactor Planar Algebras of Index 4</i> Topology Students Workshop, Georgia Tech	July 2022
	<i>Diagrammatic Presentations of Affine Type A Subfactor Planar Algebras of Index 4</i> BRIDGES Conference, Poster Session, University of Utah	June 2022
	<i>Comparing Voting Systems Using Kemeny Rankings</i> Undergraduate Research Conference, Student Poster Session - UC Davis	April 2014
	<i>Comparing Voting Systems Using Kemeny Rankings</i> MAA Golden Section Meeting, Student Poster Session - Sonoma State University	February 2014
TEACHING EXPERIENCE	Teaching Assistant - UC Santa Barbara MATH 108AB - Introduction to Linear Algebra MATH 8 - Transition to Higher Mathematics MATH 6A - Vector Calculus I MATH 6B - Vector Calculus II MATH 34B - Calculus for Social and Life Sciences	Fall 2019 - Present
	Associate Instructor - UC Santa Barbara MATH 6A - Vector Calculus I MATH 4A - Linear Algebra with Applications	Summer 2020, Summer 2021
	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, Summer 2016
	<i>Katherine Johnson: The Pioneer Whose Research Got Us to Outer Space!</i> Hypatian Seminar, UC Santa Barbara	November 2021
	<i>The Total Beginner's Guide to Creating Your Graduate Student Webpage</i> Hypatian Seminar, UC Santa Barbara	January 2021
	<i>Pascal's Triangle</i> AWM, UC Santa Barbara	February 2020
	<i>Ada Lovelace: Victorian Computer Programming Visionary</i>	November 2019

Hypatian Seminar - University of California, Santa Barbara

My Career In Web Development (and Teaching!)
Mathematics Career Day - University of California, Davis

May 2018

Fractals and the World Around Us (with Dr. Jeffrey Meyer)
Math Day Fun Session - University of Oklahoma

November 2015

Barbers, Painters, and Berry: Famous Paradoxes and Their Relation to Mathematics
Math Club at UC Davis

October 2013

WORK EXPERIENCE

Graduate Teaching Assistant
Mathematics Department, UC Santa Barbara

September 2019-present

Adjunct Faculty Professor
Cosumnes River College, Los Rios Community College District

January 2018 - August 2019

Internet Data Exchange Director
iHOUSEweb Inc.

July 2017 - August 2019

Lead Mathematics Academic Tutor
Kingsfield Tutors

July 2017 - February 2018

Graduate Teaching Assistant
Mathematics Department, University of Oklahoma

August 2014 - May 2017

Tutor
Math Center, Mathematics Department, University of Oklahoma

August 2014 - May 2017

Grader
Mathematics Department, University of California - Davis

August 2013 - June 2014

Tutor
Student Academic Success Center, University of California - Davis

August 2013 - June 2014

ACADEMIC SERVICE

AWM Student Chapter at UCSB Secretary
Directed Reading Program Co-Organizer and Mentor, UCSB
Graduate Quantum Algebra and Topology Seminar Co-Organizer, UCSB
AWM Chapter at UCSB Founder and President
REU Graduate Mentor, UCSB
Quantum Algebra and Topology Seminar Co-Organizer, UCSB
Women in STEM Mentor, UCSB
UC Santa Barbara Math Circle Aide
Mathematics Career Day Panelist, UC Davis
Mathematics Graduate Student Association Vice President, OU
Math Day Fun Session Coordinator, OU
Volunteer - Women in STEM Conference by OK-EPSCOR
Directed Reading Program Graduate Mentor, OU
Math Teacher's Circle in OKC, Graduate Coordinator and Co-Founder
TORAS Conference, Co-Organizer
Undergraduate Mathematics Committee, Graduate Representative, OU
Math Club Event Coordinator, UC Davis
Undergraduate Volunteer, Davis Math Circle
Coach, SF Bay Area/NorCal American Regions Mathematics League
Math Club President, Math Club at UC Davis

June 2023 - present
Winter 2020 - present
September 2021 - present
August 2022 - June 2023
June 2022 - August 2022
September 2021 - June 2022
September 2019 - June 2022
September 2020 - September 2021
May 2018
August 2016 - May 2017
November 2015, November 2016
October 2016
January 2016 - May 2016
August 2015 - May 2017
March 2015
August 2014 - May 2015
August 2013 - June 2014
December 2012 - April 2013
December 2012 - June 2014
August 2012 - June 2013

PROGRAMMING

Excel, MATLAB, C, HTML, CSS, Python, Mathematica, Sage, and LaTeX