

# Kyla Pohl

Mathematics PhD Candidate – Graduate Employee

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## RESEARCH INTERESTS

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I work in combinatorics with specific interest in Jack symmetric functions and hook length formulae.

## EDUCATION

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University of Oregon, PhD Mathematics Advisor: Ben Young	Expected: June 2026
University of Oregon, MS Mathematics	June 2021
St. Olaf College, BA, <i>magna cum laude</i> Major: Mathematics, Concentration: Japan Studies	May 2019
Budapest Semesters in Mathematics Summer Program	June - Aug 2017

## PUBLICATIONS

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K. Pohl, B. Young; “Jack Combinatorics of the Equivariant Edge Measure;” submitted for publication.  
<https://arxiv.org/abs/2410.03912>

R. Gaybullayev, A. Khudoyberdiyev, K. Pohl; “Classification of solvable Leibniz algebras with abelian nilradical and  $k - 1$  dimensional extension;” *Communications in Algebra*, 48:7 (2020), 3061-3078. <https://arxiv.org/pdf/1808.06171.pdf>

J. Dietz, M. Klein, S. Nycklemoe, K. Pohl; “Automorphism Orbits of some Metacyclic Groups;” *Pi Mu Epsilon Journal* 14, no. 9 (2018): 557-564.

## PRESENTATIONS

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Formal Power Series and Algebraic Combinatorics 2025 Sapporo <i>Poster: Jack Combinatorics of the Equivariant Edge Measure</i>	July 2025
University of Oregon Student Counting Seminar <i>A Combinatorialist's View of the Hilbert Scheme of Points in the Plane</i>	April 2025
University of Oregon Student Counting Seminar <i>A Markov Chain Monte Carlo Algorithm</i>	Feb 2025
Joint Mathematics Meetings 2025 <i>Jack Combinatorics of the Equivariant Edge Measure</i>	Jan 2025

University of Oregon Combinatorics Seminar <i>Jack Combinatorics of the Equivariant Edge Measure</i>	Nov 2024
Lane Community College Introduction to STEM Seminar <i>Partitions and Hook Walk Algorithms</i>	Nov 2024
University of Oregon Student Counting Seminar <i>Jack Combinatorics of the Equivariant Edge Measure</i>	Oct 2024
University of Oregon Combinatorics Seminar <i>An Introduction to Jack Symmetric Functions</i>	Nov 2023
University of Oregon Student Counting Seminar <i>An Introduction to Ramsey Theory</i>	Oct 2022
Joint Mathematics Meetings 2019 <i>Classification of solvable Leibniz algebras with abelian nilradical and <math>k - 1</math> dimensional extension</i>	Jan 2019

## TEACHING EXPERIENCE

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Note: All classes conducted at the University of Oregon unless otherwise specified; \* indicates remote, † indicates two sections.

### Instructor of Record

Foundational Algebra and Mathematical Modeling	Fall 2024, †Fall 2023
Calculus I	Spring 2023
Precalculus II	Winter 2023, Fall 2022, Spring 2022
Precalculus I	Winter 2022, *Winter 2021
Elementary Statistics	*Summer 2020

### Teaching Assistant

Elementary Statistics	Fall 2021, *Spring 2021, Winter 2025, Spring 2025
Precalculus I	*Fall 2020
Ballroom Dance I (St. Olaf College)	Fall 2018, Spring 2019

### Tutoring

One-on-one Japanese language tutor (St. Olaf College)	Fall 2018
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### Grading

Introduction to Combinatorics – Linear Algebra I – Abstract Algebra I (St. Olaf College)

## PROFESSIONAL DEVELOPMENT

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Journeys In Mathematics <i>Massachusetts Institute of Technology</i>	June 2024
Cascade Lectures in Combinatorics <i>University of Oregon</i>	May 2024
Summer School in Algebraic Combinatorics <i>Krakow, Poland</i>	July 2022
BRIDGES Conference <i>University of Utah</i>	July 2021
International Research Experience for Students <i>Tashkent, Uzbekistan</i>	May - July 2018

## MENTORSHIP

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<b>UO Math Directed Reading Program</b>	Jan 2023 - Present
<ul style="list-style-type: none"><li>• Led an undergraduate student through readings</li><li>• Advised student in writing and giving a 20 minute chalk talk on reading topic</li></ul>	
<i>Intransitive Dice</i>	Winter 2025
<ul style="list-style-type: none"><li>• Student studied intransitive dice, basic tournament (graph) theory</li><li>• Student built intransitive dice set generator and checker in Python and tournament generator in SageMath</li></ul>	
<i>Partially Ordered Sets</i>	Winter 2024
<ul style="list-style-type: none"><li>• Student read beginning of Chapter 3 of Stanley's Enumerative Combinatorics</li><li>• Reading culminated in student presenting the Fundamental Theorem of Finite Distributed Lattices</li></ul>	
<i>Ramsey Theory</i>	Winter 2023
<ul style="list-style-type: none"><li>• Student explored introductory graph theory with an eye towards coloring via readings from A First Course in Graph Theory by Chartrand and Zhang</li><li>• Reading lead to student providing an overview of Ramsey theory</li></ul>	
<b>UO Math First-Year Graduate Mentorship Program</b> <i>Mentor</i>	Sept 2022 - June 2024
<ul style="list-style-type: none"><li>• Supported a student in the first year of their graduate program</li><li>• Met informally with student one-on-one over lunch once each term to check in</li></ul>	

## UO Women in Graduate Studies JUMP! Program

Oct 2022 - May 2023

- Mentored two undergraduate STEM students to further their personal, educational, and career skills in the sciences
- Discussed and guided interest in mathematics courses and summer programs with mentees

## SERVICE

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### UO AWM Student Chapter

Sept 2019 - Present

#### *Vice President*

Sept 2024 - Present

- Scheduled and organized executive council meetings
- Assisted president with standard duties
- Coordinated aspects of general membership meetings

#### *K-12 Committee Member*

Sept 2021 - Present

- Developed lessons and activities to provide mathematics outreach to girls in local K-12 schools
- Guided children through mathematical explorations at local outreach events such as the Eugene Science Center's Girls' Science Adventure Days and Willagillespie Middle School STEAM Night.

#### *Reading Room Committee Co-Chair*

Sept 2020 - Present

- Managed a library of books highlighting underrepresented voices in mathematics
- Planned and hosted small group discussions about these topics

### UO Math Directed Reading Program Organization Committee

Sept 2022 - Present

- Advertised the Directed Reading Program to undergraduates via the proliferation of posters and the annual Q & A event
- Organized Directed Reading Program all-participant meetings
- Corresponded with program participants regarding their program progress

### Eugene Math Festival

Feb 2021 - Present

- Prepared pre-made exercises and activities for children ahead of the festival
- Set up and organized assigned booth before families arrived at the event
- Lead children through mathematics discovery activities

## UO ADSE Nagoya Program

Feb 2025

- Delivered a short introductory talk introducing combinatorics to undergraduates from Nagoya University visiting UO
- Guided the students through tiling research activities to bolster understanding of day-to-day life in mathematics graduate school
- Conversated about attending graduate school in the US with these students

## UO Mathematics Graduate Affairs Committee

Sept 2020 - Sept 2023

### *Student Representative*

- Advised the department head on subjects pertaining to the graduate program
- Oversaw graduate student office occupancy changes
- Coordinated the first-year mentorship program and paired mentors and mentees

## SCHOLARSHIP AND MEMBERSHIP

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Association for Women in Mathematics

University of Oregon Mathematics Department 2019 Vitulli Scholar

Phi Beta Kappa Honor Society

Pi Mu Epsilon Honor Society

## SKILLS

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Japanese (Conversational)

SageMath/Python

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