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## Publications

- 2025 *Enumerating submonoids of finite commutative monoids* (with Caoilainn Kirkpatrick, Amelie el Mahmoud, Kyle Ormsby, Angélica M. Osorno, Dale Schandelmeier-Lynch, Lixing Yi, Avery Young, Saron Zhu). [arXiv:2508.20786](https://arxiv.org/abs/2508.20786) (*submitted*)

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## Talks

### Research

- Oct 2024 *Saturated transfer systems on cylinders* — Penn Graduate Geometry-Topology Seminar  
Expository
- Apr 2026 *Parameterized higher category theory* — Penn Oral Qualifying Exam
- Apr 2026 *Categorical Fraïssé theory* — Penn Model Theory Seminar
- Sep 2025 *A survey of directed topology* — Penn Graduate Geometry-Topology Seminar
- Sep 2025 *The sequence 1, 11, 21, 1211, ... (its name is a spoiler!)* — Penn Pizza Seminar
- Jul 2025 *What if algebra but equality is just vibes?* — Mathcamp Colloquium
- Apr 2025 *The K-theory of Lawvere theories* — Penn Kan Seminar on Algebraic K-Theory
- Apr 2025 *Deloopings of categories* — Penn Kan Seminar on Algebraic K-Theory
- Apr 2025 *A connectivity toolbox* — AMTRaK IV
- Mar 2025 *Classifying spaces of categories* — Penn Kan Seminar on Algebraic K-Theory
- Feb 2025 *Artin gluing in logic* — Penn Graduate Logic Seminar
- Feb 2025 *The logical interpretation of topology* — Penn Graduate Geometry-Topology Seminar
- Jan 2025 *Categorical semantics, via vibes* — Penn Pizza Seminar
- Nov 2024 *Girard's paradox for set theorists, via Hurkens* — Penn Graduate Logic Seminar
- Sep 2024 *Towards linear topoi* — Penn Graduate Logic Seminar

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## Teaching or Course Assisting

### University of Pennsylvania

- Fall 2025 MATH 1070: *Mathematics of Change, Part I*

### State Correctional Institution Chester

- Spring 2026 *Math in the Courtroom* (with Athina Avrantini, Maxine Calle, Mona Merling, Marc Muhleisen)

### Canada/USA Mathcamp

- 2025 Week 5 *A Cute Combinatorics Problem*
- 2025 Week 4 *A Tour of Paradox*
- 2025 Week 3 *Oops All Algebra: An Introduction to Infinity-Categories*
- 2025 Week 2 *Category Theory from Scratch* (with Della Hendrickson)
- 2025 Week 1 *Extra Stretchy Rubber-Sheet Geometry*

### Reed College

- Spring 2024 Math 111: *Calculus*

Spring 2024 CSCI 387: *Computability and Complexity*  
Spring 2024 CSCI 121: *Computer Science Fundamentals I*  
Fall 2023 Math 201: *Linear Algebra*  
Fall 2023 CSCI 384: *Programming Language Design and Implementation*  
Fall 2023 CSCI 121: *Computer Science Fundamentals I*  
Spring 2023 Math 332: *Abstract Algebra*  
Spring 2023 CSCI 393: *Operating Systems*  
Spring 2023 CSCI 121: *Computer Science Fundamentals I*  
Fall 2022 CSCI 387: *Computability and Complexity*  
Fall 2022 CSCI 122: *Intermediate Computer Science Fundamentals I*  
Fall 2022 CSCI 121: *Computer Science Fundamentals I*  
Spring 2022 CSCI 221: *Computer Science Fundamentals II*  
Spring 2022 CSCI 121: *Computer Science Fundamentals I*  
Fall 2021 CSCI 121: *Computer Science Fundamentals I*