

# Emily Rudman

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Apr. 2024

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## ACADEMIC POSITIONS

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- **The Ohio State University** Columbus, OH  
*Ross Visiting Assistant Professor of Mathematics* August. 2021 - Present
- **The Ohio State University** Columbus, OH  
*Post-Doctoral Scholar with Sanjeevi Krishnan: AFOSR Grant FA9550-16-1-0212* Sept. 2020 - Aug. 2021

## EDUCATION

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- **Indiana University** Bloomington, IN  
*PhD in Mathematics advised by Ayelet Lindenstrauss* Aug. 2014 - Sept. 2020
- **Indiana University** Bloomington, IN  
*Master of Science in Applied Statistics* Aug. 2016 - Dec. 2018
- **Indiana University** Bloomington, IN  
*Master of Arts in Mathematics* Aug. 2014 - May 2016
- **Westminster College** New Wilmington, PA  
*Bachelor of Science in Mathematics* Aug. 2010 - Dec. 2013

## TEACHING EXPERIENCE AT THE OHIO STATE UNIVERSITY

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- **Instructor, Math 1116 Online:** Excursions in Math Summer 2024
- **Instructor of 3 sections, Math 1116:** Excursions in Math Spring 2024
- **Instructor of 2 sections, Math 1172:** Engineering Mathematics A Spring 2023
- **Instructor of 2 sections, Math 1116:** Excursions in Math Fall 2022
- **Instructor, Math 1149:** Trigonometry Summer 2022
- **Instructor of 3 sections, Math 2153:** Calculus III Spring 2022

## TEACHING, ASSISTING, GRADING, AND RECITATION EXPERIENCE AT INDIANA UNIVERSITY

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- **Co-teacher Online, M106:** The Mathematics of Decision and Beauty Summer 2020
- **Recitation Leader, M212:** Calculus II Spring 2020
- **Help Session Co-Leader, M301/M311:** Linear Algebra and Calculus III Spring 2020
- **Grader, M584:** Recursion Theory Fall 2019
- **Grader, M301:** Linear Algebra and Applications Fall 2019
- **Assistant, M118:** Finite Mathematics Fall 2018
- **Recitation Leader, M212:** Calculus II Fall 2018
- **Instructor, M118:** Finite Mathematics Summer 2018
- **Mentor, Directed Reading Program:** Cryptography Spring 2018
- **Instructor, D116:** Introduction to Finite Mathematics I Spring 2018
- **Instructor, D117:** Introduction to Finite Mathematics II Fall 2017
- **Instructor, J112:** Introduction to College Mathematics II Summer 2017
- **Instructor, D116:** Introduction to Finite Mathematics I Spring 2017
- **Assistant, M118:** Finite Mathematics Fall 2016
- **Assistant, D117:** Introduction to Finite Mathematics II Fall 2016
- **Instructor, J111:** Introduction to College Mathematics I Summer 2016
- **Instructor, D116:** Introduction to Finite Mathematics I Spring 2016
- **Instructor, M018:** Basic Algebra for Finite Mathematics I Fall 2015
- **Instructor, J110:** Introductory Problem Solving Summer 2015
- **Instructor, M014:** Basic Algebra Fall 2014

## PUBLICATIONS

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1. Emily Rudman. The cyclic homology of  $k[x_1, x_2, \dots, x_d]/(x_1, x_2, \dots, x_d)^2$ . *Communications in Algebra*, 50(10):4356–4378, 2022
2. Malgorzata E. Čavar, Emily M. Rudman, and Antonio Oštarić. Temporal versus spectral cues in 12 perception of vowels: A study with polish and croatian learners of english. *Journal of Slavic Linguistics*, 30(1):85–107, 2022
3. Malgorzata E Čavar, Emily M Rudman, and Steven M Lulich. Palatalization in coronal consonants of polish: A three-/four-dimensional ultrasound study. *The Journal of the Acoustical Society of America*, 148(6):EL447, December 2020

## PREPRINTS

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- **A convenient category of cubes** submitted  
*joint work with Sanjeevi Krishnan*
- **High central vowels in Polish, Ukrainian and Russian** submitted  
*joint work with Malgorzata Čavar, Neha Nagara, and Lily Peters*
- **Russian sibilants in the production of American L2 learners** in preparation  
*joint work with Malgorzata Čavar and Jane Hacking*

## INVITED TALKS

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- **Ohio MAA Spring Sectional Meeting** Ashland, OH  
*An Introduction to Lean* April 6, 2024
- **AMS Special Session on Commutative Algebra, Brown University** Zoom  
*Towards a Dold-Kan correspondence for semigroups* March 20-21, 2021
- **Algebra Seminar, University of Manchester** Zoom  
*The cyclic homology of  $k[x_1, \dots, x_d]/(x_1, \dots, x_d)^2$*  December 15, 2020
- **Topology Seminar, University of Nevada Reno** Zoom  
*The cyclic homology of  $k[x_1, \dots, x_d]/(x_1, \dots, x_d)^2$*  December 4, 2020
- **Topology Seminar, University of Kentucky and Vanderbilt University** Zoom  
*The cyclic homology of  $k[x_1, \dots, x_d]/(x_1, \dots, x_d)^2$*  October 15, 2020
- **AMS Special Session on Homological Methods in Algebra, Penn State** Zoom  
*The cyclic homology of  $k[x_1, \dots, x_d]/(x_1, \dots, x_d)^2$*  October 4, 2020
- **The Ohio State University Homotopy Theory Seminar** Columbus, OH  
*The cyclic homology of  $k[x_1, \dots, x_d]/(x_1, \dots, x_d)^2$*  November 14, 2019

## CONTRIBUTED TALKS

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- **The Ohio State University Semigroup Seminar** Zoom  
*Lattices and Prime Ideals of Arbitrary Finite Monoids* February 11, 2021
- **The Ohio State University Semigroup Seminar** Zoom  
*Class Functions and Generalized Conjugacy Classes for Monoids* November 5, 2020
- **Indiana University Machine Learning Seminar** Zoom  
*Support Vector Machines* April 2, 2020
- **Rose-Hulman Math Seminar** Terre Haute, IN  
*An introduction to topology* October 30, 2019
- **AMS Special Session on Commutative Algebra** Binghamton, NY  
*The cyclic homology of  $k[x_1, \dots, x_d]/(x_1, \dots, x_d)^2$*  October 12 - October 13, 2019

- **Joint Mathematics Meetings** Baltimore, MD  
*Prime Factorization of Kászonyi Numbers: joint work with Ariana Cappon* *January 15 - January 18, 2014*
- **Indiana Undergraduate Research Conference** Bloomington, IN  
*Prime Factorization of Kászonyi Numbers: joint work with Ariana Cappon* *July 23, 2013*
- **Pi Mu Epsilon Undergraduate Research Conference** Youngstown, OH  
*Properties of Simple, Cubic Graphs that Contain Three Unique Hamiltonian Circuits* *February 23, 2013*
- **MathFest** Madison, WI  
*Lollipops and Their Pebbling Numbers* *August 2 - August 4, 2012*

## AWARDS

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- **2019-20 IU Glenn Schober Memorial Travel Award:** to attend the JMM
- **2019-20 IU Provost's Travel Award for Women in Science:** to attend the JMM in Denver
- **2019 AMS Travel Grant Award:** to attend the AMS sectional meeting in Binghamton, NY
- **2018-19 IU Provost's Travel Award for Women in Science:** to attend the 2018 European Talbot Workshop
- **2017-18 IU Glenn Schober Memorial Travel Award:** to attend a Midwest Topology Conference in Northwestern
- **2017-18 IU Provost's Travel Award for Women in Science:** to attend the AMS sectional meeting in Vanderbilt
- **2017-18 IU Provost's Travel Award for Women in Science:** to attend a Women in Topology conference in MSRI
- **2016-17 IU Rothrock Teaching Award:** for recognition of Excellence in Teaching Mathematics

## SELECTED PROFESSIONAL DEVELOPMENT

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- **AMS MRC** West Greenwich, RI  
*Combinatorial Applications of Computational Geometry and Algebraic Topology* *May 30 - June 5, 2021*
- **Shanks Workshop on Homotopy Theory** Nashville, TN  
*Vanderbilt University* *April 13 - April 14, 2019*
- **Workshop on Functor Calculus** Columbus, OH  
*The Ohio State University* *March 16 - March 17, 2019*
- **European Talbot Workshop** Fischbach bei Dahn, Germany  
*Free Loop Spaces with Nathalie Wahl and Alexandru Oancea* *July 29 - August 4, 2018*
- **Women in Topology** Berkeley, CA  
*Mathematical Sciences Research Institute* *November 29 - December 1, 2017*

## OUTREACH AND SERVICE

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- **The Ross Mathematics Program:** Gave an introduction to topology talk, Ohio Dominican University June 20, 2022
- **IU Graduate Student Peer Mentorship Program Co-Founder:** at Indiana University Summer 2020
- **Co-Organizer of Graduate Student Topology and Geometry Conference:** at Indiana University Spring 2020
- **Indiana Statistical Consulting Center:** Consultant Fall 2018
- **Indiana University Science Fest:** Volunteer Oct. 24, 2015