

EDUCATION	Purdue University <i>Ph.D. Candidate in Mathematics</i> • Research Interests: Applied Analysis, PDEs & Inverse Problems • Advisors: Peijun Li & Isaac Harris May 2027 (expected)
	New Jersey Institute of Technology <i>M.S. in Applied Mathematics</i> • Advisor: Christina Frederick May 2021
	Rutgers University <i>B.A. in Mathematics</i> May 2018
PUBLICATIONS & PREPRINTS	1 I. Harris and G. Ozochiawaeze, “Novel implementation of the extended sampling method for inverse biharmonic scattering,” arXiv:2605.12367 2 R. Ceja Ayala, I. Harris, and G. Ozochiawaeze, “Factorization method for the biharmonic scattering problem for an absorbing penetrable scatterer,” <i>Communications on Analysis and Computation</i>, 9 (2026), 16–39. DOI: 10.3934/cac.2026010 3 I. Harris, P. Li, and G. Ozochiawaeze, “Sampling methods for the inverse cavity scattering problem of biharmonic waves,” <i>Inverse Problems</i>, 42 (2026), 015002.
WORK EXPERIENCE	MIT Lincoln Laboratory , Lexington, MA <i>Group 36 Summer Research Intern</i> May–Oct 2023 Advanced compressive sensing techniques for radar imaging and missile target detection, culminating in a presentation on compressive radar sensing for defense applications.
	MIT Lincoln Laboratory , Lexington, MA <i>Group 37 Summer Research Intern</i> May–Aug 2022 Applied signal processing and array interferometry methods for sonar coherence analysis and underwater detection and tracking, building on prior experience in high-resolution sensing.
	New Jersey Institute of Technology , Newark, NJ <i>Acoustic Simulation Researcher</i> Jul 2020–May 2021 Initiated research in finite element and domain decomposition modeling of underwater acoustic wave propagation using COMSOL, laying the foundation for later seabed physics-based modeling.
TEACHING	• Lecturer, Purdue University — MA 16020: <i>Applied Calculus II</i>, Fall 2025 • Recitation Instructor, Purdue University — MA 261: <i>Multivariable Calculus</i>, Spring 2024 • Teaching Assistant, Purdue University — MA 511: <i>Linear Algebra and Applications</i>, Spring 2023 • Recitation Instructor, Purdue University — MA 261: <i>Multivariable Calculus</i>, Fall 2022 • Recitation Instructor, Purdue University — MA 162: <i>Calculus II</i>, Spring 2022 • Recitation Instructor, Purdue University — MA 161: <i>Calculus I</i>, Fall 2021 • Instructor, Accel Learning — Mentored students in preparation for AMC and AIME math competitions, Spring–Fall 2020 • Math Instructor, Mathnasium, K-12 Teaching & Tutoring, Fall 2018–Spring 2019

CONFERENCES & PRESENTA- TIONS	Invited & Contributed Talks	
	Baby Inverse Problems (BIP) Seminar, Online (Invited Speaker)	2026
	<i>A Factorization Method Approach to the Biharmonic Transmission Problem in Absorbing Media</i>	
	SIAM Conference on Analysis of PDEs (PD25), Pittsburgh (Invited Speaker)	2025
	<i>A Factorization Method Approach to the Biharmonic Transmission Problem in Absorbing Media</i>	
	SIAM Conference on Analysis of PDEs (PD25), Pittsburgh (Invited Speaker)	2025
	<i>Localizing Cavities in Biharmonic Scattering with Limited Data</i>	
	UNCG PDE Conference, Greensboro, NC, USA	2025
	<i>Strengthened Analysis of Linear Sampling Method for Biharmonic Wave scattering</i>	
	Summer School: Elliptic PDE, UC Irvine	2025
	<i>Localizing Cavities in Biharmonic Scattering with Limited Data</i>	
	MIT Lincoln Laboratory, Group 36	2023
	<i>Compressive Radar Imaging in Missile Defense</i>	
	MIT Lincoln Laboratory, Group 37	2022
	<i>Quantifying Real Operational Performances of SONAR Arrays in Random Ocean Environments</i>	
	Selected Institutional Seminars	
	CCAM Lunch Seminar, Purdue University	2025
	<i>Localizing Cavities in Biharmonic Scattering with Limited Data</i>	
	Graduate Student Analysis Seminar, Purdue University	2023, 2025
	<i>Qualitative Reconstruction Methods in Inverse Biharmonic Scattering</i>	
	Purdue Graduate Research Day & SIAM Student Chapter, Purdue University	2024
	<i>A Linear Sampling Method for Recovering a Clamped Cavity in a Thin Plate</i>	
	Purdue Math Student Colloquium, Purdue University	2022
	<i>Finite Element Modeling of Underwater Acoustic Environments</i>	
	Conference Attendance	
	Geometric Spectral Theory and Applications, Isaac Newton Institute, UK	2026
	Mathematics of Wave Phenomena, Karlsruhe Institute of Technology, Germany	2025
	Mathematics and Statistics in Industry Workshop, Panel Discussion, IN, USA	2025
	Paris-Saclay Conference in Analysis and PDE, Orsay, France	2024
	New Ideas in Computational Inverse Problems, BIRS Banff, Canada	2022
AWARDS AND HONORS	Workshop on Scientific Computing, Purdue University, IN, USA	2022
	• Bilsland Dissertation Fellowship	2026
	• SIAM (Society of Industrial & Applied Mathematics) Student Travel Award	2025
	• “Special Purdue employee recognition”	2024
	• GEM Fellowship	2022
	• Graduate C/Startup Research Grant	2020
	• Tau Sigma Honors Society	2016
	Computing & Software: Python, C++, MATLAB, COMSOL, FEniCS	
SKILLS		

SERVICE	Mentor, Directed Reading Program in Markov Chains & Stochastic Processes <i>Purdue University — mentee: Caleb Dai</i>	2026
	Purdue Math Department Graduate Representative <i>Purdue University</i>	2025-2026
	Mentor, Directed Reading Program in Computational Topology <i>Purdue University — mentee: Aaron (Sang Hyun) Kim</i>	2025
	Founder and Organizer, Math History Seminar <i>Purdue University</i>	2022-2025
	Rutgers Undergraduate Mathematics Association Treasurer & Web Manager <i>Rutgers University</i>	2017-2018
INFORMAL TALKS	The Dawn of the Diophantine Era: Algebra at the Crossroads of Empires <i>Math History Seminar, Purdue University</i>	2025
	Fixed Points in Action: from Brouwer to Lefschetz & Beyond <i>Topolodays, Purdue University</i>	2025
	The Life, Mathematics, and Political Advocacy of Sofya Kovalevskaya <i>Math History Seminar, Purdue University</i>	2024
	The K-theoretic Atiyah-Singer Index Theorem <i>Student Operator Algebras Seminar, Purdue University</i>	2024
	Introducing Pseudodifferential Operators <i>Purdue Math Student Colloquium</i>	2024
	Bourbaki and the Foundations of Modern Math <i>Math History Seminar, Purdue University</i>	2023
	Wasan: Mathematical Treasures in Early Modern Japan <i>Math History Seminar, Purdue University</i>	2022