

GENERAL OZochiawaeze

linkedin.com/in/general-ozochiawaeze-568748139/

EDUCATION	Purdue University <i>Ph.D. Candidate in Mathematics</i> May 2027 (expected) <ul style="list-style-type: none">• Research Interests: Applied Analysis, PDEs & Inverse Problems• Advisors: Peijun Li & Isaac Harris
	New Jersey Institute of Technology <i>M.S. in Applied Mathematics</i> May 2021 <ul style="list-style-type: none">• Advisor: Christina Frederick
	Rutgers University <i>B.A. in Mathematics</i> May 2018
PUBLICATIONS & PREPRINTS	<ol style="list-style-type: none">1. R. Ayala, I. Harris, and G. Ozochiawaeze. “Factorization method for the biharmonic scattering problem for an absorbing penetrable obstacle”. (Submitted) (arXiv:2511.05711)2. I. Harris, P. Li, and G. Ozochiawaeze. “Sampling methods for the inverse cavity scattering problem of biharmonic waves”. <i>Inverse Problems</i> 42 015002 (2026).
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	<ul style="list-style-type: none">• Lecturer, Purdue University — <i>MA 16020: Applied Calculus II</i>, Fall 2025• Recitation Instructor, Purdue University — <i>MA 261: Multivariable Calculus</i>, Spring 2024• Teaching Assistant, Purdue University — <i>MA 511: Linear Algebra and Applications</i>, Spring 2023• Recitation Instructor, Purdue University — <i>MA 261: Multivariable Calculus</i>, Fall 2022• Recitation Instructor, Purdue University — <i>MA 162: Calculus II</i>, Spring 2022• Recitation Instructor, Purdue University — <i>MA 161: 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 & SEMINARS	Baby Inverse Problems (BIP) Seminar (invited speaker)	2026
	<i>A Factorization Method Approach to the Biharmonic Transmission Problem in Absorbing Media</i>	
	SIAM Conference on Analysis of Partial Differential Equations (PD25), Pittsburgh (invited speaker)	2025
	<i>A Factorization Method Approach to the Biharmonic Transmission Problem in Absorbing Media</i>	
	SIAM Conference on Analysis of Partial Differential Equations (PD25), Pittsburgh (invited speaker)	2025
	<i>Localizing Cavities in Biharmonic Scattering with Limited Data</i>	
	CCAM Lunch Seminar, Purdue University (speaker)	2025
	<i>Localizing Cavities in Biharmonic Scattering with Limited Data</i>	
	Summer School: Theory and Applications of Elliptic PDE, UC Irvine (speaker)	2025
	<i>Extending Qualitative Reconstruction to Biharmonic Scattering with Limited Data</i>	
	Graduate Student Analysis Seminar, Purdue University (speaker)	2025
	<i>Extending Qualitative Reconstruction in Biharmonic Scattering with Limited Data</i>	
	CCAM Lunch Seminar, Purdue University (speaker)	2025
	<i>On Sampling Methods for Recovering a Clamped Cavity in a Thin Plate</i>	
	Mathematics and Statistics in Industry Workshop and Panel Discussion (attendee)	2025
	Conference on Mathematics of Wave Phenomena, Karlsruhe Institute of Technology (attendee)	2025
	Purdue Graduate Research Day, Purdue University (speaker)	2024
	<i>A Linear Sampling Method for Recovering a Clamped Cavity in a Thin Plate</i>	
	SIAM Student Chapter Conference, Purdue University (speaker)	2024
	<i>A Linear Sampling Method for Recovering a Clamped Cavity in a Thin Plate</i>	
Paris-Saclay Conference in Analysis and PDE, Laboratoire de Mathématiques d'Orsay (attendee)	2024	
Graduate Student Analysis Seminar, Purdue University (speaker)	2023	
<i>Comparing and Integrating the Probe Method and Method of Singular Sources</i>		
Graduate Student Analysis Seminar, Purdue University (speaker)	2023	
<i>The Factorization Method in Inverse Scattering</i>		
Integrated Missile Defense Technology Group, MIT Lincoln Laboratory (speaker)	2023	
<i>Compressive Radar Imaging in Missile Defense</i>		
Advanced Undersea Systems & Technology Group, MIT Lincoln Laboratory (speaker)	2022	
<i>Quantifying Real Operational Performances of SONAR Arrays in Random Ocean Environments</i>		
Purdue Math Student Colloquium, Purdue University (speaker)	2022	
<i>Finite Element Modeling of Underwater Acoustic Environments</i>		
Workshop on Scientific Computing, Purdue University (attendee)	2022	
New Ideas in Computational Inverse Problems, BIRS, Banff International Research Station (attendee)	2022	

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