

GENERAL O. OZochiawaeze

✉ oozochia@purdue.edu 🌐 obiorag.github.io 🔗 LinkedIn 🐙 GitHub
West Lafayette, IN

EDUCATION

Purdue University Aug 2021 – May 2027
Ph.D. in Mathematics (Inverse Problems, PDEs, Scattering)
Advisors: Isaac Harris & Peijun Li

New Jersey Institute of Technology May 2021
M.S. in Applied Mathematics

Rutgers University May 2018
B.A. in Mathematics

PROFESSIONAL EXPERIENCE

Purdue University 2023 – Present
Applied Researcher (Inverse Problems & Wave Imaging)

- Advanced non-iterative imaging algorithms for reconstructing hidden structures from wave-based measurements, enabling stable recovery under limited-aperture data.

MIT Lincoln Laboratory 2022 – 2023
Signal Processing Research Intern (Radar & Acoustics)

- Engineered sparse-data SAR radar reconstruction methods using compressive sensing for target recovery from undersampled measurements in data-limited sensing regimes.
- Evaluated sonar array localization performance under signal degradation, quantifying robustness and failure modes of acoustic sensing systems.

New Jersey Institute of Technology 2020 – 2021
Research Assistant

- Formulated and simulated acoustic wave propagation in heterogeneous media using finite element and domain decomposition methods, quantifying sensitivity of scattering behavior in high-frequency regimes.

TEACHING & SERVICE

Lecturer, Purdue University 2025
MA 16020 — Applied Calculus II

Teaching Assistant, Purdue University 2021-2024
STAT 416; MA 251; MA 161; MA 162

PUBLICATIONS & PREPRINTS

- I. Harris and G. Ozochiawaeze, “Novel implementation of the extended sampling method for inverse biharmonic scattering” (working title), In preparation.
- R. Ceja Ayala, I. Harris, and G. Ozochiawaeze, “Factorization method for the biharmonic scattering problem for an absorbing penetrable scatterer,” arXiv preprint arXiv:2511.05711
- I. Harris, P. Li, and G. Ozochiawaeze, “Sampling methods for the inverse cavity scattering problem of biharmonic waves,” *Inverse Problems*, 42 (2026), 015002

AWARDS & HONORS

Bilsland Dissertation Fellowship (2026–2027) GEM Fellowship (2022–2023) Graduate C/Startup Grant (2020–2021)
Tau Sigma Honors Society