OBINNA UROM
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I am driven by a passion for exploring how teachers can effectively balance subject matter expertise with innovative teaching strategies to address critical environmental topics. My work is inspired by foundational research on Pedagogical Content Knowledge (PCK) and aims to understand how educators can transform complex scientific content into accessible and engaging knowledge for students. My goal is to empower educators to foster environmentally conscious and scientifically literate citizens.

EDUCATION

Master of Science Geology, 2024 GPA: 3.84/4.0
University of Toledo Ohio
Thesis Title: Quantifying vertical variation in soil properties using Electromagnetic Imaging (EMI) and Ground Penetrating Radar (GPR).
Advisor: Dr. Kennedy Doro
External funding: ODHE-HABRI

Bachelor of Science, Geology, 2019 GPA: 4.77/5.0
Federal University of Technology, Owerri (FUTO)
Thesis Title: Electro-geohydraulic estimation of shallow aquifers of Owerri and environs, Southeastern Nigeria using multiple empirical resistivity equations.
Advisor: Dr. Alex Opara

RESEARCH EXPERIENCE

Department of Geosciences, Auburn University, Alabama, United States
Ausgust 2024 – Present
- Support research on Geoscience Education at the Geocognition lab.

Department of Environmental Sciences, University of Toledo, Ohio, United States
May 2022 – July 2024
Graduate Research Assistant
- Support research on near surface geophysics at Dr. Doro's Geophysics lab.

Department of Geology, Federal University of Technology, Owerri, Nigeria
Oct.2019 – April 2022
Graduate Research Assistant
- Supported water resources and environmental research Exploration Geoscience Team

TEACHING EXPERIENCE

Department of Geosciences, Auburn University, Alabama, United States

August 2024-Present
Teaching Assistant

- Taught Dynamic Earth Lab to undergraduates
- Teach Concepts of Science Lab to undergraduates

Department of Environmental Sciences, University of Toledo, Ohio, United States
May 2022 – Present
Undergraduate Mentor

- Mentored undergraduate students working intermittently at Dr. Doro's Geophysics lab.
- Mentored National Science Foundation (NSF) Research Experienced Undergraduates (REU) posted to Dr. Geophysics lab.

Department of Geology, Federal University of Technology, Owerri, Nigeria
Oct.2019 – April 2022
Class Advisor for Second-year students

- Taught introductory Geophysics and Engineering geology tutorials to the students in the absence of the professor.

Science Department, Trinity College Cotonou, Republic of Benin
Nov.2018 – Oct.2019
Mathematics and Geography Teacher

- Taught Mathematics and Geography to seniors for one academic session
- Organized field trips and Excursion for the science students in 2018

PRESENTATIONS

1. **Title:** Time-lapse monitoring of varying soil water saturation after precipitation using electromagnetic imaging.
   Conference: Geological Society of America (GSA) Conference at Grand Rapids Michigan on May 5, 2023.

2. **Title:** Conceptions, Misconceptions, and Teaching Confidence in Earth Systems Among Nigerian Pre-Service Teachers.
   Conference: Triple Joint 75th Southeastern / 60th North-Central / 60th South-Central GSA Annual Section Meeting at Memphis, Tennessee on March 8–11, 2026

PROFESSIONAL AFFILIATIONS

- Geological Society of America (GSA), 2023
- Nigerian Mining and Geosciences Society (NMGS), 2021
- Society for Exploration Geophysicists (SEG), 2022

HONORS, AWARDS, AND SCHOLARSHIPS

- 3rd Place in Poster Presentation at ESS Symposium at Auburn University (2026)
- University of Toledo Department of Environmental Science Research grant (2023)
- Geological Society of America (GSA) Research Grant award (2023)
- School of Physical Sciences Dean's award (2017/2018) issued by the Federal University of Technology Owerri, Nigeria
- Addax Petroleum Plc undergraduate bursary award (2014-2018) for Nigerian universities