

ESTHER OYEDELE

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EDUCATION

Virginia Polytechnic Institute and State University (Virginia Tech)

Doctor of Philosophy in Geosciences

CGPA: 4.0/4.0

Graduate Certificate in Data Analytics

Graduate Certificate in Future Professoriate

Dissertation: Integration of Remote Sensing Data and Models for Prediction of Groundwater Response to Anthropogenic Drought

Advisor: Dr. Susanna Werth ([Profile](#))

Relevant Courses: Advanced Groundwater Hydrology, Statistics in Earth & Environmental Science, Radar Remote Sensing of Earth and Atmosphere, Analysis of Spatial Data, Data Analytics, Machine Learning, Space-Based Hazard Monitoring, Space-Based Environmental Intelligence, Advanced Machine Learning, Introduction to Artificial Intelligence, Preparing the Future Professoriate, Pedagogical Practices in Contemporary Contexts, Communicating Science, and The Power of Storytelling.

Blacksburg, Virginia
expected, 12/2027

05/2025

05/2024

Bowling Green State University

Master of Science in Geology

CGPA: 3.75/4.0

Certificate in Geospatial Technology

Thesis: Climate-Related Crustal Loading Deformation around Lake Mead, Nevada- Arizona, USA

Advisor: Dr. Yuning Fu ([Profile](#))

Relevant Courses: Applied Remote Sensing, Spatial Modeling, Advanced Cartographic Techniques, Applied Surface and Groundwater Modeling, Groundwater Hydrogeology, Tectonic, and Environment Geodesy.

Bowling Green, Ohio
04/2023

12/2022

Federal University of Technology Owerri

Bachelor of Technology in Geophysics

CGPA: 3.80/5.0, Second Class Honors (Upper Division)

Project: Integrated Sequence Stratigraphic Interpretation of 'Van' Field, Offshore Niger Delta

Advisor: Prof. Samuel O. Onyekuru ([Profile](#))

Relevant Courses: Fundamentals of GIS, Remote Sensing, Physical Hydrology, Physics of the Earth, Applied Seismology, Map and Map Interpretation, Geophysical Data Processing, Geophysical Field Techniques, Geology Field Mapping, Well Log Analysis, Petroleum Geology, and Exploration Methods.

Imo State, Nigeria
02/2019

PUBLICATIONS

Shirzaei, M., Awasthi, S., **Oyedele, E. O.**, Khorrami, M., Kamaraj, N., Werth, S., Matin, M., Madani, K. (2025). Building Damage Assessment of the March 2025 Myanmar Earthquake, United Nations University Institute for Water, Environment and Health (UNU-INWEH), Richmond Hill, Ontario, Canada, doi: 10.53328/INR24MSIR002.

Oyedele, E. O. (2023). *Climate-Related Crustal Loading Deformation around Lake Mead, Nevada-Arizona, USA* [Master's thesis, Bowling Green State University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=bgsu167254851731803

Nworie, C.D., Chidiebere, A.C., and **Oyedele, E.O.** (2021). Geological and Petrophysical Evaluation of Afikpo Sandstone in Afikpo Sub-Basin, Southeastern Nigeria using Integrated Approach. *International Journal of Engineering Science Invention (IJESI)*, 10(5), 07-34. DOI:10.35629/6734.

Oyedele, E.O., Okeke, O.C., and Israel, H.O. (2020). Assessment and Control of Dust and Noise Pollution in Mines and Quarries: A Review. *World Journal of Engineering Research and Technology*, 6(1), Pp 27-46.

Oyedele, E.O., Nnaji, V.I., Okeke, O.C., and Ozotta, O.O. (2019). Evaluation of Suitability of Natural Gravels Associated with Nsukka Formation in Owerre-Ezukala (Awka Area), Southeastern Nigeria as Aggregates for Highway Pavement. *The International Journal of Engineering and Science (IJES)*, 8(11), Pp 32-39. DOI:10.9790/1813-0811013239.

Oyedele, E.O., Okeke, O.C., and Dike, E.C. (2018). Evaluation of Swelling and Slaking Characteristics of Shales from Okigwe Area, Southeastern Nigeria. *Journal of Scientific and Engineering Research*, 5(10), 222-230.

Under Review

Oyedele, E.O., Werth, S., and Carlson, G. Surface water shortages increase the probability of an anthropogenic groundwater drought in the Colorado River Basin. (Submitted to Earth and Space Science)

Hagen, A.P.I., DeNunzio, M., Kroehler, C.J., Chen, S., Goh, Y.-X., Burke, K.L., **Oyedele, E.O.**, Hockman, C., Vayda, P., Bracci, N., Pagani, M., Good, D.J., Pfeiffer, D.G., Allen, E., and Raun, P. Tapping into the Success of Science on Tap New River Valley: Lessons Learned from Seven Years of a Community-Centered Science Outreach Program. (Submitted to Journal of Community Engagement and Scholarship)

ABSTRACTS AND PRESENTATIONS

* = Oral research presentation, ° = Poster research presentation, + = Invited talks, # = Workshop/Training presentation

#**Oyedele, E.O.** (2025). GeoComm: Bridging Data and Decision for a Safer Tomorrow. Tutorial Workshop presentation at the United States Geospatial Intelligence Foundation GEOINT Symposium 2025, St. Louis, MO.

***Oyedele, E.O.** (2025). Enhancing your Communication Skills. Invited Talk at the *Fralin Undergraduate Research Fellows Reception*, Blacksburg, VA.

#**Oyedele, E.O.**, and Dasho, O. (2025). Enhancing Science Communication Skills for Geoscientists. Short Course presentation at the 2025 GSA Southeastern Section Meeting, Harrisonburg, VA.

***Oyedele, E.O.**, Mandadi, P., Hagen, A., and Vayda P., (2025). Engaging Communities through the Virginia Tech Center for Communicating Science. Invited Talk at the *Widening Inclusivity in the (Geo)Sciences*, Virginia Tech, VA.

° **Oyedele, E.O.**, Khorrami, M., Werth, S., Fu, Y., and Shirzaei, M. (2024). Monitoring Lake Powell: Insights into Water Storage and Surface Deformation from Satellites. *AGU Fall Meeting Abstracts*. Poster presentation at the *American Geophysical Union, Fall Meeting*, Washington, D.C.

° **Oyedele, E.O.**, Abolafia-Rosenzweig, R., He, C., and Werth, S. (2024). Integrated Analysis of Climate Interactions and Groundwater Variability Across the Contiguous U.S. using CONUS404 Hydro-climate Dataset. *AGU Fall Meeting Abstracts*. Poster presentation at the *American Geophysical Union, Fall Meeting*, Washington, D.C.

***Oyedele, E.O.** (2024). Where Did Our Water Go? *Virginia Tech's Center for Communicating Science*. 90 seconds Oral presentation at the *Nutshell Games*, Blacksburg, VA.

***Oyedele, E.O.**, and Werth, S. (2024). Assessing the Impact of Anthropogenic Drought on Groundwater Storage in the Colorado River Basin. *GSA Connects 2024 Abstracts*. Oral presentation at the *GSA Connects 2024 Meeting*, Anaheim, CA.

#**Oyedele, E.O.** (2024). Effective Science Communication: Bridging the Gap Between Scientists and the Public. Workshop presentation at the *NABG 43rd Annual Technical Conference*, Atlanta, GA.

°**Oyedele, E.O.**, Khorrami, M., Werth, S., Fu, Y., and Shirzaei, M. (2024). Disappearing of Lake Powell: Clues and Remedies from Integrated Analysis of InSAR Deformation and Climate Data. *GEOINT Abstracts*. Poster presentation at the United States Geospatial Intelligence Foundation GEOINT 2024 Symposium, Kissimmee, FL.

***Oyedele, E.O.** (2024). Unlocking Hidden Depths: Satellite Insights into Groundwater Dynamics in the Western USA. Invited Talk at the *Roanoke Valley Mineral and Gem Society Meeting*, Roanoke, VA.

***Oyedele, E.O.**, and Werth, S. (2024). Assessing Colorado River Basin Groundwater Storage Changes during Recent Drought: Implications for Effective Water Management. *GPSS Abstracts*. Oral presentation at the 40th Graduate Research Symposium, Virginia Tech, Blacksburg, VA.

***Oyedele, E.O.**, and Werth, S. (2024). Estimating Groundwater Storage Changes in The Colorado River Basin - Impact of Recent Drought and Implications for Water Management. *GSRS Abstracts*. Oral presentation at the 29th Annual Geoscience Student Research Symposium, Virginia Tech, Blacksburg, VA.

***Oyedele, E.O.**, and Werth, S. (2023). Colorado River Basin's Groundwater Storage Declines Without Recovery During Recent Droughts. *AGU Fall Meeting Abstracts*. Oral presentation at the *American Geophysical Union, Fall Meeting*, San Francisco, CA.

°**Oyedele, E.O.**, Larour, E., Buzzanga, B., Bato, M.G., and Lundgren, P. (2023). Land Motion and Sea Level Change Using ARIA GUNW Products: A Case Study in Long Beach, California. *AGU Fall Meeting Abstracts*. Poster presentation at the *American Geophysical Union, Fall Meeting*, San Francisco, CA.

°**Oyedele, E.O.**, Fu, Y., and Martens, H. (2022). Crustal Deformation around Lake Mead, Nevada-Arizona due to Current Drought of 2022. *AGU Fall Meeting Abstracts*. Poster presentation at the *American Geophysical Union, Fall Meeting*, Chicago, IL.

°**Oyedele, E.O.**, Fu, Y., and Martens, H. (2022). Hydrological loading deformation around Lake Mead, Nevada-Arizona, USA. Poster presentation at the 2022 SAGE/GAGE Workshop, Pittsburgh, PA.

°**Oyedele, E.O.**, Fu, Y., and Martens, H. (2022). Crustal Deformation around Lake Mead, Nevada-Arizona due to Current Drought of 2022. *GSA Connects 2022 Abstracts*. Poster presentation at the *GSA Connects 2022 Meeting*, Denver, CO.

°**Oyedele, E.O.**, Fu, Y., and Martens, H., Doyle, B., and Xue, L. (2021). Response of Crustal Deformation in Lake Mead due to Current Drought of 2021. *AGU Fall Meeting Abstracts*, G15C-09. Poster presentation at the *American Geophysical Union, Fall Meeting*, New Orleans, LA.

***Oyedele, E.O.**, Nnajiolor, V.I., and Okeke, O.C. (2019). Evaluation of Suitability of Natural Gravels Associated with Nsukka Formation in Owerre-Ezukala (Awka Area), Southeastern Nigeria as Aggregates for Highway Pavement. Oral presentation at the *Nigerian Mining and Geosciences Society 55th Annual International Conference and Exhibitions*, Enugu State, Nigeria

***Oyedele, E.O.** (2019). Integrated Sequence Stratigraphic Interpretation of “Van” Field, Offshore Niger Delta, Nigeria. Oral presentation at the *2019 Society of Petroleum Engineers Nigeria Council STSE*, Osun State, Nigeria.

*Onyekuru, S.O., Onyedrie, N.K, Opara, K.D. Njoku, I.O., Nwigbo, U., and **Oyedele, E.O.** (2018). Integrated Sequence Stratigraphic Analysis and Interpretation of “N” Field, Offshore Niger Delta. Oral presentation at the *Nigerian Association of Petroleum Explorationists 2018 Annual International Conference*, Lagos State, Nigeria.

***Oyedele, E.O.**, Onyekuru, S.O., and Njoku, I.O. (2018). 3D Seismic Interpretation and Petrophysical Evaluation of “Esthyl” Field, Offshore Niger Delta; Implications for Hydrocarbon Prospectivity. Oral presentation at the *9th NAPE-NMGS Mini-Conference*, Delta State, Nigeria.

PROFESSIONAL EXPERIENCES

Virginia Polytechnic Institute and State University (Virginia Tech)

Blacksburg, Virginia

Doctoral Research Assistant

01/2023 – Present

- Assuming responsibilities in research and creative activities for the Hydrologic Innovation & Remote Sensing Lab (HIRS)
- Using satellite observations, hydrologic and climate data to study the impacts of extreme weather events in the southwest USA
- Developing work plans in accordance with our research objectives
- Performing scientific tasks in support of projects
- Preparing research report as needed for journal publications
- Interacting primarily with my advisor and lab members within the department
- Demonstrating strong analytical, problem-solving, and communication skills, as well as the ability to work independently and as part of a collaborative research team in a dynamic and interdisciplinary research environment.

NSF National Center for Atmospheric Research

Boulder, Colorado

Visiting Doctoral Researcher

05/2024 – Present

- Conducting innovative research at the Research Applications Laboratory (RAL)
- Actively contributing to the implementation of the novel CONUS404 dataset and WRF aimed at addressing real-world challenges in societal impacts of weather and climate variability.
- Analyzing large datasets and conducting statistical and numerical analyses to gain insights into complex atmospheric processes and phenomena.
- Collaborating with interdisciplinary teams of scientists to design and execute research projects, foster knowledge exchange, and achieve project objectives.

NASA Jet Propulsion Laboratory

Pasadena, California

Research Graduate Student

06/2023 – 08/2023

- Worked with the Sea Level and Ice (329C) Group
- Used remotely sensed data products and measurements, and modelling techniques to improve sea-level projections
- Lead research tasks to develop new approaches/methods to research sea-level science
- Assisted with data analysis, technical analysis and fundamental research
- Interacted primarily with my mentor and group members within the Earth Science section

Bowling Green State University

Bowling Green, Ohio

Graduate Research Assistant

08/2022 - 12/2022

- Conducted research project on crustal deformation around Lake Mead, Arizona-Nevada, USA
- Sort guidance in applying applicable policies, procedures and practices to new situations to determine appropriate action
- Received guidance from advisor to modify scientific development and test techniques, processes and procedures
- Prepared a detailed research report needed for journal publication

Degeconek Nigeria Limited

Geoscientist

Graduate Trainee

National Youth Service Corp (NYSC)

Geophysicist (Intern)

Lagos State, Nigeria

09/2020 - 12/2020

02/2019 - 08/2020

03/2019 - 02/2020

09/2017 - 12/2017

- Successfully led and managed tasks in different positions while exercising team spirit
- Carried out 2D and 3D seismic interpretation of oil fields in Niger Delta Basin, using Geographix and Petrel software
- Carried out petrophysical and volumetrics Analysis of the oil fields
- Evaluated some marginal oil fields in the OML 40 (Gbetiokun), OML 49 (Bime, Olure, and Omofejo), and OML 67 (Amaniba, Ekpai, and Ndibe) during the 2020 Marginal Field Bid Round in Nigeria
- Did data prying for the marginal fields within OML 49 (Bime and Olure) and OML 95 (Olomu and Azama)
- Wrote technical bid and competent persons report for some of the evaluated marginal oil fields

Okoro and Company (WA) Limited

Geophysicist (Intern)

Rivers State, Nigeria

09/2015 - 12/2015

- Interpreted geophysical surveys on borehole drilling sites
- Assembled and fixed tools on the borehole drilling rig
- Profiled geological formations encountered while drilling

TEACHING EXPERIENCES**Virginia Polytechnic Institute and State University (Virginia Tech)**

Graduate Teaching Assistant

Blacksburg, Virginia

01/2024 – Present

Undergraduate/Graduate Teaching – GEOS 4804/5804G: (Advanced) Groundwater Hydrology (32 students) Fall 2024, Spring 2025

Undergraduate Teaching – GEOS 3014: Environmental Geosciences (56 students) Spring 2024

- Support instructional activities for Geosciences courses, providing guidance and support to undergraduate and graduate students.
- Proctor hydrology lab sessions and grading of lab manuscripts.
- Conduct regular office hours to provide additional academic assistance and guidance to students, addressing questions and concerns related to course materials.
- Assess student performance and provided feedback on assignments, quizzes, tests, and examinations.
- Demonstrate a commitment to fostering an inclusive and supportive learning environment, respecting the diverse backgrounds and perspectives of my students.

Upward Bound Program, University of Toledo

Science Instructor

High School Teaching - Science

Toledo, Ohio

06/2022 - 08/2022

Summer 2022

- Conducted National Aeronautics and Space Administration (NASA) research using GLOBE Observations
- Provided instructional activities to high school students
- Conducted science lab sessions and grading of lab manuscripts

Bowling Green State University

Head, Graduate Teaching Associates

Graduate Teaching

Bowling Green, Ohio

08/2021 - 05/2022

Fall 2021 and Spring 2022

- Mentored and supervised graduate teaching associates in their teaching roles
- Coordinated geological lab sessions and geological field experiences

Bowling Green State University

Graduate Teaching Associate

Undergraduate Teaching – GEOL 1040: Earth Environments

Bowling Green, Ohio

01/2021 - 05/2021

Spring 2021

- Provided instructional activities of the Earth and Environment Sciences to undergraduate students
- Proctored geological lab sessions and grading of lab manuscripts
- Supervised geological field experiences for undergraduate students

LEADERSHIP EXPERIENCES**Geological Society of America (GSA)**

Chair, Student Advisory Council (SAC)

07/2025 – Present

Chair-Elect, Student Advisory Council (SAC)
Member-at-Large, Student Advisory Council (SAC)

08/2024 – 06/2025
07/2024 – 08/2024

- Elected by the GSA community to serve on the GSA SAC for a two-year term
- Elected by the GSA SAC members to serve as a Chair for a three-year term, encompassing roles as Chair-Elect, Chair and Past-Chair.
- Lead representation of student members' interests and concerns to the GSA Council
- Participate in GSA Council meetings as a non-voting invitee and contribute to discussions on policy and initiatives
- Collaborate with SAC members to develop programs and resources for GSA student members
- Assist in planning and organizing student-focused events and activities at GSA meetings
- Facilitate communication between GSA SAC members, GSA student members and the GSA leadership
- Promote student involvement and engagement within the GSA

African Graduate Students' Organization at Virginia Tech

President

07/2024 - 06/2025

- Spearheaded events initiatives to promote cultural awareness and foster a sense of community, like the 'Experience Africa', an annual cultural showcase that celebrates African traditions, cuisine, and art, engaging over 80 attendees from the Virginia Tech community.
- Organized and facilitated professional development seminars featuring distinguished guest speakers, alumni, and current students, focusing on building global networks for academic and career success, thus bridging connections between past and present members.
- Initiated the first collaborative seminar event among all African, Black, and Caribbean student organizations at Virginia Tech, creating a unified platform to share ideas, resources, and opportunities.
- Promoted cultural awareness and engagement among members and the broader campus community.
- Championed diversity, equity, and inclusion initiatives within the organization and on campus.
- Established and maintain connections with alumni to build a supportive network.
- Engaged with prospective Virginia Tech students to promote the organization and assist with their transition to university life.

Media Coordinator

06/2023 - 06/2024

- Spearheaded strategic efforts as to enhance organization visibility and engagement across digital platforms.
- Implemented dynamic social media campaigns and curated content, resulting in an impressive over 66% and 79% followers' growth on Instagram and LinkedIn respectively, significantly expanding our community's reach.
- Consistently delivered a weekly newsletter, meticulously sourcing and sharing news, resources, and opportunities beneficial to our members.
- Fostered a well-informed and actively engaged AGSO network through timely and relevant communication strategies.

Virginia Tech Department of Geosciences

Co-Chair, Geosciences Student Research Symposium (GSRS)

05/2024 - 04/2025

- Led in organizing the 30th annual GSRS, a two-day event featuring research presentations from graduate and undergraduate students.
- Coordinated event logistics, including scheduling and venue management.
- Fostered interdisciplinary collaboration and student development within the Department of Geosciences.

i-Scholar Initiative

Mentor and Programs Manager

01/2020 - Present

- Mentoring prospective graduate students
- Reviewing students' applications for scholarships and graduate schools
- Helping students prepare for standardized graduate tests
- Working with the secretariat to coordinate the Organization's programs within the year

School of Earth, Environment and Society, Bowling Green State University

Head, Graduate Teaching Associates

08/2021 - 04/2022

- Mentored and supervised graduate teaching associates in their teaching roles
- Coordinated geological lab sessions and geological field experiences

Bowling Green State University

Secretary, Graduate Student Senate

08/2021 - 04/2022

- Performed secretariat roles as assigned by the graduate student senate
- Represented 32 graduate students in the School of Earth, Environment, and Society

- Learnt the latest issues affecting the graduate students I represented and presented them to the graduate student senate
- Advocate for individual graduate students and departmental needs to the general assembly
- Voted on issues and concerns impacting graduate student life

Nigerian Association of Petroleum Explorationists Students' Chapter, FUTO

Sponsorship Chairman

2/2017 - 12/2018

- Oversaw the sourcing of sponsors for workshops, training, and meetings organized by the association
- Planned and executed, alongside other executive members, a two-day Short Course on Sequence Stratigraphy
- Chaired the organization of Chapter Technical Meetings
- Mobilized student members for conferences for their professional development

Federal University of Technology Owerri (FUTO), Nigeria

Ethics and Membership Director, Rotaract District 9140

10/2015 - 10/2016

- Lead membership drives to recruit new members
- Educate new and existing members about Rotary International
- Organize membership training sessions
- Mobilize members for fellowships, training, and seminars
- Serve as a member of the planning and organizing committee for new member inductions and inaugurations

Member, Student Representative Council (MSRC), Student Union Government

10/2015 - 08/2016

- Served as an elected representative of the student body
- Advocated for student interests and concerns in council meetings
- Participated in decision-making processes affecting student welfare and university policies
- Organized and supported student events and initiatives
- Facilitated communication between students and university administration
- Collaborated with other council members to address student issues and improve campus life

HONORS, GRANTS AND AWARDS

• SEG/David W. Worthington Scholarship, Society of Exploration Geophysicists (SEG)	06/2025
• Geological Society of America (GSA) 2025 Graduate Student Research Grant	06/2025
• Virginia Tech Graduate Student Travel Fund Program (TFP) Award	06/2025
• The foundation of AIPG 2025 William J. Siok Graduate Student Scholarship (Link)	06/2025
• Friends of the National Center Education Fund	05/2025
• IEEE Geoscience and Remote Sensing Society Travel Grants	04/2025
• Virginia Tech Student Engagement and Campus Life – Outstanding Graduate Student Leader	04/2025
• Virginia Tech Student Engagement and Campus Life – Honorable Mention: Commitment to Service	04/2025
• P.E.O. International Peace Scholarship (IPS)	04/2025
• Association for Women Geoscientists (AWG) Takken Student Research Presentation Travel Award	03/2025
• United States Geospatial Intelligence Foundation (USGIF) 2025 GEOINT Symposium Travel Grant	03/2025
• American Geophysical Union (AGU) - Local Science Partners Award (Link)	03/2025
• Virginia Tech Department of Geosciences 2025 Tillman Award for Teaching Excellence in Advanced Level Courses	03/2025
• Virginia Tech Department of Geosciences Summer Stipend Award	03/2025
• Virginia Tech Department of Geosciences Research Award	03/2025
• Virginia Tech 2025 Graduate Student of the Year Award Nominee	03/2025
• Virginia Tech 2025 Graduate Student Service Excellence Award Nominee	03/2025
• Sigma Xi, The Scientific Research Honor Society - Grants in Aid of Research Award (Link)	01/2025
• NSF NCAR Research Applications Laboratory Visiting Scientist Program Award	01/2025
• Communicating Science Conference - Science Writers 2024 Travel Award (Link)	11/2024
• Center for Communicating Science at Virginia Tech - 2024 Nutshell Games Winner (Link)	11/2024
• William Averette Anderson (Bill Anderson) Fund Fellowship (Link)	10/2024
• Association for Women Geoscientists (AWG) 2024 Sand Student Research Presentation Travel Award (Link)	09/2024
• Geological Society of America (GSA) E-an Zen Geoscience Outreach Grant (Link)	09/2024

• National Association of Black Geoscientists (NABG) Scholarship Award (Link)	09/2024
• United States Geospatial Intelligence Foundation (USGIF) Leidos Scholarship for AI/ML Advancement (Link)	08/2024
• SEG/David W. Worthington Scholarship, Society of Exploration Geophysicists (SEG) (Link)	08/2024
• Geological Society of America (GSA) On To the Future (OTF) Award (Link)	06/2024
• Virginia Tech Graduate Student Travel Fund Program (TFP) Award (Link)	05/2024
• Second Best Poster, United States Geospatial Intelligence Foundation (USGIF) GEOINT Symposium (Link)	05/2024
• Spring 2024 Art and Photo Contest: Second Place, Virginia Tech Graduate School (Link)	05/2024
• Most Dynamic Multimedia Project Award, AGU Voices for Science (Link)	04/2024
• American Geophysical Union (AGU) - Voices for Science Fellowship Award (Link)	04/2024
• United States Geospatial Intelligence Foundation (USGIF) 2024 GEOINT Symposium Travel Grant	03/2024
• University Corporation for Atmospheric Research (UCAR) Next Generation Fellowship (Link)	10/2023
• United States Geospatial Intelligence Foundation (USGIF) Doctoral Scholarship (Link)	08/2023
• Pressure Seafloor Geodesy 2023 Workshop Travel Award (Link)	04/2023
• 2023 NSF GAGE/SAGE Community Science Workshop Travel Scholarship (Link)	03/2023
• 2022 Authors and Artists Honor, Friends of the University Libraries, Bowling Green State University (Link)	11/2022
• Graduate Student Senate Fall 2022 Regalia Award, Bowling Green State University (Link)	10/2022
• Geology Graduate Student Service Award, Bowling Green State University (Link)	04/2022
• Shanklin Colloquium Outstanding Poster Abstract, First Place, Bowling Green State University (Link)	04/2022
• Recipient, i-Scholar Initiative Scholarship (Link)	09/2019
• Second Best Paper, 9 th NAPE/NMGS Mini-Conference (Link)	08/2018
• Icon of Leadership, Federal University of Technology Owerri (Link)	07/2015
• Miss Geology, Federal University of Technology Owerri (Link)	09/2014

ONGOING COLLABORATIONS

• External: NSF National Center for Atmospheric Research - Research Applications Laboratory	Since 2024
• External: NASA Jet Propulsion Laboratory (Sea Level and Ice)	Since 2023
• Within Virginia Tech: Earth Observation and Innovation Laboratory	Since 2023

WORKSHOPS AND TRAINING ATTENDED

• Positionality in Hazards and Disaster Research and Practice, CONVERGE Training Module, Natural Hazards Center, University of Colorado Boulder, CO	07/2025
• Broader Ethical Considerations for Hazards and Disaster Researchers, CONVERGE Training Module, Natural Hazards Center, University of Colorado Boulder, CO	07/2025
• Cultural Competence in Hazards and Disaster Research, CONVERGE Training Module, Natural Hazards Center, University of Colorado Boulder, CO	06/2025
• Social Vulnerability and Disasters, CONVERGE Training Module, Natural Hazards Center, University of Colorado Boulder, CO	06/2025
• How to build a Research Proposal, University Corporation for Atmospheric Research (UCAR), Next Generation Fellowship Retreat	05/2025
• UCAR/NCAR Equity and Inclusion (UNEION) Training	07/2024
• Science Policy, University Corporation for Atmospheric Research (UCAR), Next Generation Fellowship Retreat	06/2024
• Noah-MP International Annual Users' Workshop	06/2024
• Create Deepfake Satellite Imagery with Generative AI, GEOINT Symposium	05/2024
• Using AI to Quickly Identify Damage After Severe Weather Events, GEOINT Symposium	05/2024
• Wideband Radar Imaging (ISAR and SAR) ... Under the Hood, GEOINT Symposium	05/2024
• The Next SAR Revolution: The Natural SAR Image in an Easy-to-Use Form, GEOINT Symposium	05/2024
• American Geophysical Union's (AGU) Voices for Science Workshop	04/2024
• Pressure Seafloor Geodesy Workshop	04/2023
• NSF SAGE/GAGE Community Science Workshop	03/2023
• InSAR Processing and Theory (GMTSAR), UNAVCO	07/2022

• Spatial Literacy (SPLIT) Geoscience, Bowling Green State University	05/2022
• H. Nasr El-Din Summer Internship, Arab Oil & Gas Academy	07/2020
• Volumetrics and Economics of Oil and Gas Industry, NAPE	07/2020
• PSENSE Certificate, Poise Graduate Finishing Academy	12/2019
• Energy Transition Innovation towards a Low-Carbon Future, IFP School	08/2019
• Sequence Stratigraphy, Federal University of Technology Owerri Students' Chapter	08/2018
• Petroleum Systems, 9th NAPE/NMGS Mini-Conference	06/2018

PROFESSIONAL ASSOCIATION AFFILIATIONS

• Member, Institute of Electrical and Electronics Engineers (IEEE) Geoscience and Remote Sensing Society (GRSS)	Since 2025
• Member, Association for Women in Science (AWIS)	Since 2025
• Member, National Association of Science Writers	Since 2024
• Member, Sigma Xi – The Scientific Research Honor Society	Since 2024
• Member, Association for Women Geoscientists (AWG)	Since 2024
• Member, United States Geospatial Intelligence Foundation (USGIF)	Since 2023
• Member, Geological Society of America (GSA)	Since 2022
• Member, American Geophysical Union (AGU)	Since 2021
• Member, National Association of Black Geoscientists (NABG)	Since 2021
• Member, American Institute of Professional Geologists (AIPG)	Since 2021
• Member, EarthScope Community	Since 2021
• Member, American Association of Petroleum Geologists (AAPG)	Since 2018
• Member, Society of Petroleum Engineers (SPE)	Since 2018
• Member, Nigerian Association of Petroleum Explorationists (NAPE)	Since 2016
• Member, Nigerian Mining and Geosciences (NMGS)	Since 2016

PROFESSIONAL SERVICES

Scientific Reviewer/Judge

• Reviewer, University Corporation for Atmospheric Research (UCAR) Next Generation Fellowship Program	06-07/2025
• Reviewer, United States Geospatial Intelligence Foundation (USGIF) Scholarship Program	04-05/2025
• Judge, Western Virginia Regional Science Fair (WVRSF)	03/2025
• Judge, Project Forum, Roanoke Valley Governor's School for Science and Technology	02/2025
• Reviewer, Outstanding Student Paper Award (OSPA), American Geophysical Union Fall Meetings	2023 & 2024
• Judge, Geological Society of America (GSA) Connects 2024 Hydrogeology Division Student Poster Session	09/2024
• Judge, 43rd Annual Technical Conference of the National Association of Black Geoscientists (NABG)	09/2024
• Evaluator, 2024 NSF NCAR, UCAR, & UCP Summer Student Research Poster Symposium	08/2024
• Reviewer, Green Schools Conference (GSC) 2025 Proposals	07/2024
• Reviewer, 2024 Virginia Governor's School for Agriculture (VGSA) Research Symposium	07/2024
• Reviewer, Thermo Fisher Scientific Junior Innovators Challenge, Society for Science	06/2024
• Judge, Annual Dennis Dean Undergraduate Research & Creative Scholarship Conference	04/2024
• Judge, Virginia Tech - Geosciences Student Research Symposium (GSRS)	03/2024

Volunteering

• William Averette Anderson (Bill Anderson) Fund - Culture Committee Member	09/2024 - Present
• Pen Pal Volunteer, Letters to a Pre-Scientist	09/2024 - Present
• Student Assistant, United States Geospatial Intelligence Foundation (USGIF) GEOINT Symposium	05/2025
• Student Volunteer, Geological Society of America (GSA) 2025 Southeastern Section Meeting	03/2025
• Volunteer Ambassador, Geological Society of America (GSA) Virtual Volunteer Fair Part 2	10/2024
• Volunteer, Virginia Tech - Geosciences Department's Booth at the Geological Society of America (GSA) Connects 2024	09/2024
• Volunteer, National Center for Atmospheric Research (NCAR) Explorer Lecture Series	07/2024
• Volunteer, National Center for Atmospheric Research (NCAR) Booth at the Boulder Pride Event	06/2024

- Student Assistant, United States Geospatial Intelligence Foundation (USGIF) GEOINT Symposium 05/2024
- Coordinating Committee Member, Virginia Tech - Geosciences Student Research Symposium (GSRS) 03/2024
- HIRS Lab representative, Virginia Tech Geosciences - Undergraduate Research Information Session (URIS) 03/2024
- Student Volunteer, American Geophysical Union (AGU) Fall Meeting 12/2022 & 12/2023
- Student Volunteer, Geological Society of America (GSA) Connects 10/2022

POPULAR SCIENCE WRITING AND STORIES

- [The Professional Geologists - William Siok Graduate Essay](#), Pg. 29 06/2025
- [Are Autonomous Vehicles the Answer to Safer, Smoother Traffic?](#) 01/2025
- [Esther Oyedele: Looking from space to understand what's beneath our feet](#) 12/2024
- [Nutshell Games: Where did our water go? \(Award Winner\)](#) 11/2024
- [Jordan Boone: The sweet science of artificial sweeteners](#) 04/2024

SCIENCE OUTREACH AND MENTORING

Girls Launch Program, Virginia Tech Center for Communicating Science **Radford, Virginia**
Science Outreach Mentor 01/2025 - Present

- Mentor Virginia Teachers for Tomorrow students at Radford High School to prepare for them for careers in education.
- Provide hands-on lessons to help them teach kindergarten students at McHarg Elementary School.

Science on Tap - New River Valley **Blacksburg, Virginia**
Science Outreach Coordinator 05/2024 - Present

- Collaborate with a team to organize monthly science outreach talks at a local brewery.
- Recruit speakers from Virginia Tech and local community
- Arrange hour-long, informal presentations that are accessible to a general audience
- Showcase a variety of research topics and specialists in each session.

American Geophysical Union (AGU)
Voices for Science Fellow 04/2024 - Present

- Organize and participate in various community events, engaging the public with interactive science demonstrations and educational activities.
- Develop and implement outreach strategies to connect with diverse audiences, including underrepresented communities in STEM.
- Produce science content for social media platforms, and newsletters to reach a broader audience and promote scientific literacy.
- Collaborate with other science communicators and professionals to share best practices and improve outreach efforts.
- Participate in training sessions and workshops to enhance skills in public speaking, science writing, and media engagement.

Girls Launch Program **Pembroke, Virginia**
Science Outreach Volunteer 10/2024

- Facilitated engaging learning sessions for three kindergarten classes (19 students each) at Eastern Elementary School, Giles County, VA.
- Delivered a brief lesson on the topic "Where's the Water?" related to my scientific research to spark curiosity.
- Organized hands-on activities, including a matching game and coloring scenes of water sources in nature.

Virginia Tech – Geosciences Field Trip for 8th Graders **Blacksburg, Virginia**
Science Outreach Volunteer 10/2024

- Volunteered for field trips on the Huckleberry Trail for 8th-grade Earth science classes at Blacksburg Middle School, organized by the Virginia Tech Department of Geosciences.
- Assisted in providing a valuable field experience for approximately 225 students, fostering their interest in Earth science.
- Led activities and mini lectures on topics including geologic time, structure and tectonics, and sedimentary rocks.
- Contributed to an NSF-sponsored outreach program aligned with the 8th-grade curriculum, enhancing students' hands-on learning experiences.

Virginia Tech - Hokie for a Day Expo for 5th Graders **Blacksburg, Virginia**
Science Outreach Exhibitor 09/2024

- Organized and led an interactive exhibit to demonstrate the science behind tornado formation using "Tornado in a Bottle" experiments to about 60 fifth-grade students from Belle Heth Elementary School in Radford, VA.
- Developed hands-on learning stations where students created their own tornado bottles, encouraging engagement and curiosity in meteorology.
- Designed educational posters and trivia about tornadoes, featuring easy-to-understand visuals and fun facts to effectively communicate weather science to young audiences.
- Fostered interactive learning through direct engagement with students, helping to increase their understanding of tornado dynamics and safety.

Boulder Pride Event

Boulder, Colorado

Science Outreach Volunteer/Exhibitor

06/2024

- Collaborated with the SciEd team from National Center for Atmospheric Research (NCAR) to ensure successful and engaging demonstrations
- Engaged with event attendees, providing information about atmospheric science and NCAR's work.
- Assisted with science demonstrations including tornadoes in a bottle - explained the principles of vortex formation, air pressure with plunger tops - demonstrated the effects of air pressure, and magnet activity related to sunspots - illustrated the relationship between magnetism and solar activity.

Virginia Tech - Hokie for a Day Expo for 5th Graders

Blacksburg, Virginia

Science Outreach Exhibitor

03/2024

- Collaborated with a team of Communicating Science graduate students to present environmental science research to approximately 60 fifth-grade students from Albert Harris Elementary School in Martinsville, VA.
- Developed and led hands-on activities that taught students about environmental hazards, such as soil erosion, and demonstrated methods of erosion prevention and their impact on groundwater systems.
- Conducted a live simulation using two soil models, one with vegetation and one without, to visually show the difference in runoff and water quality, fostering a deeper understanding of the relationship between land management and water conservation.
- Engaged students in interactive discussions on how nature provides essential ecosystem services, linking environmental stewardship to real-world applications.

Society of Petroleum Engineers: Young Professionals

Lagos, Nigeria

Ambassador, Ambassador Lecture Program (ALP)

10/2019 - 12/2020

- Organized ALPs in Schools in Lagos State, Nigeria.
- Visited Universities and Secondary Schools to disseminate information about the oil and gas industry.
- Shared personal experiences in the oil and gas industry to encourage the next generation.

SKILLS

Programming and Software

- MATLAB • Python • R • GMTSAR • WabInSAR • ArcGIS • QGIS • ENVI • SNAP • QSWAT • Linux
- Google Earth • LaTeX • Quarto • Visual Studio Code

Research and Data Analysis

- Remote Sensing • Geographic Information System • Data Collection • Scientific Reporting • Proposal and Grant Writing
- Proficient with MS Office Suite

Interpersonal and Communication

- Team Leadership • Team Player • Multitasking • Problem-solving • People and Time Management
- Fluent in English and Yoruba languages • Basic Proficiency in French and Igbo languages

Science Communication

- Public Speaking • Science Writing • Podcasting

Technical Skills

- Graphic designing • Filming • Video editing • Audio editing • Social media management