

PRINCE MUSA AMINU

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EDUCATION

Master of Civil Engineering (MCE) (Transportation and Civil Infrastructure)

University of Delaware, Newark, DE

2023–2025 (4.0/4.0 CGPA)

Thesis: Investigation of the use of daikon radish to fracture asphalt pavement structure.

Bachelor of Engineering in Civil Engineering (Structure)

University of Benin, Benin-City, Edo State, Nigeria

2012-2017 (First Class Honors, 4.68/5.0 CGPA)

Thesis: Investigation of the use of speed bumps as a traffic calming device in Urban areas' road infrastructure

RELEVANT COURSE WORK

Finite Element Method, Risk Analysis, Structural Mechanics, Statistical Research Method, Design of Structures, Strength of Materials, Transportation Facilities Design, Traffic Engineering and Modeling, Engineering Mathematics, and Civil Engineering Seminar.

SKILLS

Software Skills: Microsoft Office, AutoCAD, OpenRoad Designer, ArcGIS, QGIS, Global Mapper, Google Earth, Civil3D, PROTA, Orion, JMP, Python.

Soft Skills: Independent, Leadership, Team player, Organizational, Brainstorming, and Results-oriented.

TEACHING EXPERIENCE

✓ **University of Delaware Civil, Construction, and Environmental Engineering, Newark, Delaware, USA**
August 2023 – May 2025

Teaching Assistant (Solid Mechanics and Civil Engineering Material Laboratory Courses)

- Assisted in setting up, conducting, and monitoring material testing experiments
- Supported Professors during lectures and lab sessions
- Graded assignments, quizzes, exams, and lab reports
- Managed occasional classroom teaching and organized student hours.

RESEARCH EXPERIENCE

✓ **University of Delaware Civil, Construction, and Environmental Engineering, Newark, Delaware, USA**
August 2023 – May 2025

Research Assistant

- Investigated the fracture of asphalt pavement material.
- Used archival image analysis, field observations, laboratory testing, and controlled experimental setups to evaluate the structural impact of radish growth on pavement failure
- Prepared technical report and presentations of key findings

✓ **University of Benin, Benin City, Edo State, Nigeria**

August 2016 – May 2017

Final year specialization research

- Structural integrity assessment of all water tower structures in Benin City, Edo State.
- Used field observations, structural analysis tools, and AutoCAD for investigation.
- Prepared technical report and presentations of key findings

INDUSTRIAL EXPERIENCE

✓ **Pennoni Associate Inc., Newark, Delaware, USA**

August 2025 till date

Associate Engineer

- Municipal engineer for land development and stormwater management.
- Hydrological study and storm basin design using HydroCAD, AutoCAD, QGIS, and Civil 3D.
- Construction cost estimator
- Prepare bid documents and permit applications
- Quality control experts on land development grading, construction finance, and as-built plans.

✓ **Material Research and Testing Laboratory, Delaware Department of Transportation (DelDOT), Dover, Delaware, USA**

June 2024 – August 2024

Intern (EPS Tech IV)

- Conducted quality assessment material testing on civil engineering materials.
- Conducted performance investigation of engineering materials.

✓ **Edo State Flood and Erosion Watershed Management Agency, Nigeria**

October 2022 – August 2023

Civil Structural Engineer I

- Performed hydrological studies on flood-prone areas.
- Analyzed and designed hydraulic structures such as drains, retention ponds, and detention ponds, for managing stormwater
- Structural health monitoring of constructed infrastructure.

✓ **Jeffa Geo-Surveys and Technical Services Ltd, Edo State, Nigeria**

August 2020 – September 2022

Structural Engineer

- Modeled and designed building structures using Orion and PROTA Structure tools.
- Performed structural integrity assessment for vertical expansions of buildings.

✓ **Edo State Government Make Edo State Great Again (MEGA) Project, Nigeria**

February 2021 – September 2021

Data Analyst

- Collected, cleaned, analyzed, and interpreted field data using ArcGIS and QGIS.
- Presented a weekly report of the results.

✓ **Federal University Oye, Oye-Ekiti, Ekiti State, Nigeria**

June 2018 – July 2019

Volunteer Engineer (National Youth Service Corps)

- Structures design using Orion and AutoCAD
- Building and road projects supervisor
- Bid construction cost reviewer

✓ **Ife-Oluwa International College, Kwara State, Nigeria**

September 2017- June 2018, September 2019 – March 2020

Teacher

- Mathematics and Physics Teacher.
- Junior Engineer Technician society club coordinator.

LEADERSHIP AND SERVICE

- **Reviewer**, Transportation Research Board, 2024 to date (10 papers reviewed so far)
- **Senator**, Civil, Construction, and Environmental Engineering, Graduate Student Government, University of Delaware (2024–2025)
- **President**, Environmental Community Development Service (National Youth Service Corps, 2018–2019)
- **Lead Engineer**, Edo State Flood and Erosion Watershed Management Agency (2022-2023)

AWARDS AND RECOGNITION

- Outstanding Black Graduate Student, University of Delaware (2025)
- Scholar Award, EducationUSA Opportunity Fund Program (2023)
- Petroleum Development Trust Fund Awardee for MSC in France (2023)
- Commendation by NESREA for participation in Healthy Environment Campaigns (2019)
- University of Benin Scholar Prize Award, Best Graduating Student, Department of Civil Engineering, University of Benin (2018)
- Scholar Award, AGBAMI Oil Field Scholarship for Engineering and Medical Students (2014–2017)

PROFESSIONAL DEVELOPMENT

- International Conference on Ecology and Transportation ICOET, Denver, Colorado (2025)
- Transportation Research Board (TRB) 103rd Annual Meeting, Washington, D.C. (2024)
- One-week Capacity Development on Green and Gray Stormwater Infrastructure Management and Design, Zutari, South Africa (2023)
- Fundamentals of Project Management, Project Management Institute Nigeria, March 2023.
- GNSS & RTK Drone Mapping and Surveying, KEP Kunini Energy Co. Ltd (2022)

PROFESSIONAL MEMBERSHIP

- Associate Professional Member, American Society of Civil Engineers (ASCE)
- Associate Professional Member, Structural Engineering Institute of ASCE
- Member, National Society of Black Engineers (NSBE)
- Young Member, Transportation Research Board, Asphalt Pavement Rehabilitation (TRB AKP30) 2024-2025

PUBLICATION AND PRESENTATION

- Aminu, P.M., and Olubo, O.C. (2022). *Investigation of Speed Bumps on Urban Centre Road in Ugbowo, Benin City, Edo State, Nigeria*. Nigerian Journal of Environmental Sciences and Technology, 6(2), 295–305. [DOI](#)
- **Poster Presentation:** *Investigation into the Fracturing of Asphalt Pavement Surfaces Using Daikon Radishes* at DENIN Environmental Research Symposium and Civil, Construction, and Environmental Engineering External Advisory Council, Newark, Delaware, USA.
- **Lightning Talk:** *Investigation into the Fracturing of Asphalt Pavement Surfaces Using Daikon Radishes*. International Conference of Ecology and Transportation 2025, Denver, Colorado, USA.