

AFEEZ ADEMOLA BADMUS

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EDUCATION

University of Kansas, Lawrence, Kansas, KS **Jul. 2026**

PhD Civil Engineering

Dissertation: Evaluating the benefit-to-cost trade-offs of extending tornado load provisions to residential buildings

University of Kansas, Lawrence, Kansas, KS **May 2023**

MS Civil Engineering GPA: 4.0/4.0

Thesis: Wind Performance for Sheathing-to-rafter Connections in Wind Zone 2 HUD Code Homes
Relevant Courses: Matrix Analysis of Structures, Advanced Steel Bridge Design, Experimental Stress Analysis, Fracture Mechanics, Dynamics and Vibrations, Structural Mechanics, and Advanced Steel Buildings Design

Federal University of Technology, Akure, Nigeria **Nov. 2018**

BS in Civil Engineering GPA: 4.8/5.0

Class rank: (1st /100)

Relevant Courses: Reinforced Concrete Design, Strength of Materials, Geotechnical Engineering, Project Management, Civil Engineering Materials, and Design of Steel Structures

Thesis: Effect of Increase of Cement of the Initial Mix Ratio of 1:2:4 Concrete on its Characteristics Strength

PROFESSIONAL EXPERIENCE

Graduate Research Assistant **Jun. 2023 - Present**

Sutley Research Group

- Currently analyzing the effects of tornado loads on risk category II homes and estimating the cost impacting of extending tornado loads in ASCE 7 to risk category II homes

Graduate Research Assistant **Aug. 2021 – May 2023**

Fatigue and Fatigue Laboratory, Civil Engineering, University of Kansas, Lawrence, Kansas

Research Supervisor: Dr. William Collins

- Performed fatigue test on cantilever overhead sign structures (COSS) in order to characterize the fatigue behavior at the box and mast-arm connection
- Applied digital image correlation (DIC) technology to monitor and inspect fatigue cracks in steel structures

Graduate Research Assistant **Jan. 2022 – May 2023**

Structural Testing Laboratory, Civil Engineering, University of Kansas, Lawrence, Kansas

Research Supervisor: Dr. Elaina Sutley and Dr. William Collins

- Designed and detailed structural test fixtures and prepared drawings for shop fabrication
- Carried-out monotonic and cyclic tests on sheathing-to-rafter connections of manufactured homes in order to characterize performance under extreme wind conditions

Graduate Teaching Assistant**Aug. 2022 – Dec. 2022**

University of Kansas, Lawrence, Kansas

Taught course: Statics and Dynamics (CE 260)

Supervisor: Professor Bob Lyon

- Assisted faculty with critical tasks, lectured to students, and led group activity sessions
- Provided 3-hour office sessions per week, working one-on-one with students on course topics and assisting with their homework
- Prepared homework and exam solutions for students
- Proctored exams and provided grades according to university standards
- Managed class website

Graduate Assistant**May 2019 – Mar. 2020**

Department of Project Management Technology, Federal University of Technology, Minna, Nigeria.

Supervisor: Dr. Ikechukwu Diugwu

- Coordinated tutorials on construction technology and concrete technology for undergraduate students of the department
- Assisted faculty members in proctoring tests and grading assignments and exams
- Supported the head of the department with daily operational functions

Assistant Site Engineer**Dec. 2018 – Mar. 2019**

Royal Builders Limited, Lagos, Nigeria

- Supervised roofgutter construction for a proposed chapel for Maryland Comprehensive Secondary School, Maryland, Lagos, Nigeria
- Provided the right interpretation of drawings on site
- Coordinated workers and ensured safety measures were strictly followed

Structural Engineering Intern**Nov. 2017-Dec. 2017**

EOA Consultant Limited, Lagos, Nigeria

- Involved in preparing general arrangement/structural layout using AutoCAD for proposed residential development at the Lekki-peninsula, Lagos, Nigeria
- Involved in the modeling, analyzing, and design of floor beams and slab using Orion software

Civil Engineering Intern**Jun. 2017- Oct. 2017**

Royal Builders Limited, Lagos, Nigeria

- Involved in the preparation, casting, and testing of concrete cubes using a universal compression machine, and analyzing the results to determine the characteristic strength of concrete
- Involved in the supervision of the construction of pad foundation for the proposed block of classrooms for Maryland Comprehensive Secondary School, Maryland, Lagos, Nigeria
- Participated in carrying out a non-destructive test using Ultrasonic Pulse Velocity (UPV) machine on concrete columns at the construction site of the proposed block of classrooms, Maryland Comprehensive Secondary School, Maryland, Lagos, Nigeria

PUBLICATION AND CONFERENCES

Yusuf, S., Adindu, C., **Badmus, A.** and Muhammed, H. (2021), Curbing the Effect of Covid-19 Pandemic in the Nigeria Construction Industry through Digitalization of Operations and Processes. 5th CU Construction Conference; Exploring Contemporary Issues and Challenges in the Construction Industry: (CCC2021), Coventry, United Kingdom

Yusuf, S., Musa M. A., Diugwu. I., Adindu, C. and **Badmus, A.** (2021), A Systematic Literature Review Approach on the Role of Digitalization in Construction Infrastructure and Sustainable City Development in Developing Countries. 8th Zero Energy Mass Custom Housing (ZEMCH) International Conference, United Arab Emirates University Ain, Dubai, UAE

Badmus, A. A., and Ojorongbe, T. A. (2020). Effect of Increase of Cement of the Initial Mix Ratio of 1:2:4 Concrete on its Characteristics Strength. *International Journal of Innovative Science and Research Technology* 5(1), pp. 946-950

POSTER PRESENTATIONS

Badmus, A. A., Hankins, J, Sutley, E. J. and Collins, W. (2023), Wind Performance of Common Connections in Wind Zone 2 HUD Code Homes. 68th KU Annual Structural Engineering Conference

Badmus, A. A. and Sutley, E. J. (2024), Evaluating the Benefit-Cost Trade-offs of Extending Tornado Load Provision to Residential Building. 69th KU Annual Structural Engineering Conference

RELEVANT SKILLS

Proficient (Intermediate) in using AutoCAD, SAP 2000, and ETABS for structural analysis and design

Proficient (Intermediate) in using Python, MATLAB, Python, and Microsoft office suite

Proficient (Intermediate) in using LabView and Data acquisition system (DAQ)

PROFESSIONAL AFFILIATIONS

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| The Nigerian Society of Engineers, Graduate member | Jan. 2020 - Present |
| American Society of Civil Engineers (ASCE), Student member | Oct. 2021 - Present |
| American Institute of Steel Construction (AISC), Student member | Jan. 2021 - Present |
| National Society of Black Engineers (NSBE), Student member | Sept. 2022 - Present |

AWARDS AND HONORS

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| National Council of Structural Engineers Association (NCSEA) Diversity in Structural Engineering Scholarship Award | May 2024 |
| The William Averette Anderson Fund Fellowship | Oct. 2023 – Present |
| Hoglund Fellowship, School of Engineering, University of Kansas | Oct. 2023 - Present |
| 2 nd place – Best Poster Award at 68 th KU Annual Structural Engineering Conference | Mar. 2023 |
| EducationUSA Opportunity Funds Programs (OFP) U.S Embassy Nigeria | May 2020 |
| University Prize for the Best Student in the Civil Engineering Department, Federal University of Technology Akure | Nov. 2018 |

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| Prof. and Prof. (Mrs.) Ola Award for the Best Student in Geotechnical Engineering in Civil Engineering Department, Federal University of Technology Akure | Nov. 2018 |
| Dean's List Award | 2013 – 2018 |
| Abdulkabir Aliu Foundation Scholarship for Undergraduates | 2014 - 2018 |

LEADERSHIP AND VOLUNTEER WORK

The William Averette Anderson Fund

Member Council, Programming Committee **Nov. 2023 – Present**

- Assisting in organizing and executing professional development webinars for over 100 participants, analyzing and implementing community feedback

Graduate Engineering Ambassador (GEA)

University of Kansas, Lawrence, KS **Sep. 2023 – Present**

- Organize professional development training workshops for graduate students in the School of Engineering
- Participate in community service events that inform and benefit the University and local community.

i-Scholar Initiative (iSI)

Talent Development & Mentoring Manager **May 2022 – Present**

- Assisting in organizing and executing graduate school application webinars for over 300 participants
- Assisting in making payment for standardized tests for scholars applying to graduate school

NSBE Mentorship Program

University of Kansas, Lawrence, KS **Sep. 2022 – Present**

Assisted mentees in planning their academic goals and tracking their progress in school

National Youth Service Corps Program

Minna, Niger state, Nigeria **Apr. 2019 – Mar. 2020**

Anti-Corruption Community Development Service Group

Project Manager **Oct. 2019 – Mar. 2020**

Coordinated the CDS group projects, including sensitization on corruption practices to some selected secondary schools in Minna, Niger State, Nigeria.

Muslims Corpers Association of Nigeria, Minna

Public Relations Officer **Oct. 2019 – Mar. 2020**

Created and managed social media account for WhatsApp, Twitter, and Instagram, for the association.

Get Education, Get a Skill (GEGAS) **May 2019 - Present**

I take part in voluntary activities through visitation to primary and secondary schools across some selected states in Nigeria, educating and sensitizing about child abuse, pedophilia, drug abuse, and destitution.