

DAHA SHEHU ALIYU

Department of Civil Engineering, School of Engineering
2.24, Drummond Building, Newcastle University, Newcastle Upon Tyne, NE1 7RU, UK
engrshanono@gmail.com

Phone: +44 (0) 7774140047

Date of Birth: 4th May 1985 State of Origin: Kano, Nigeria

Home Address: 269 Stanton Street, Newcastle upon Tyne, NE4 5LJ, United Kingdom

Nigeria Address: No. 1677 Kurna Asabe C, Dala Local Government, Kano State, Nigeria

dahashehu.github.io/

PROFILE

Hold a Ph.D. in Structural Engineering from Newcastle University, United Kingdom; a B.Eng. in Civil Engineering from Kano University of Science and Technology, Wudil; and an M.Tech. in Structural Engineering from Sharda University, Greater Noida, India.

Ph.D. research focused on the **Performance of Cement Paste with Polypropylene Fibre and Powder at High Temperatures**, investigating ultraviolet light treatment of polypropylene to improve fire resistance in concrete structures.

Specialized in the design and analysis of concrete structures, seismic control, timber structures, and prestressed concrete.

Proficient in analysis and design of tall structures, bridge structures, prestressed concrete, foundation design, and fire-resistant concrete design.

A self-motivated professional with strong creative, analytical, and research skills, with a keen interest in innovation, manufacturing, and engineering development.

EDUCATION

- **Ph.D. in Civil (Structural) Engineering**, Newcastle University, Newcastle Upon Tyne, UK (2019 – 2024)
 - **Research Topic:** Performance of Cement Paste with Polypropylene Fibre and Powder at High Temperatures. Investigated methods to reduce the fire impact on concrete structures using ultraviolet light-treated polypropylene.
- **M.Tech. in Civil Engineering (Structural Option)**, Sharda University, Greater Noida, Uttar Pradesh, India (2014 – 2015)
 - **Research Topic:** Comparative Study of Elastic and Plastic Analysis of Indian Steel Members Subjected to Fire Using SAFIR and ANSYS Software.
- **B.Eng. in Civil Engineering**, Kano University of Science and Technology, Wudil, Kano, Nigeria (2006 – 2011)
 - **Research Topic:** Computer-Aided Analysis and Design of Cantilever Retaining Wall.

AREAS OF SPECIALIZATION

- Analysis and design of tall structures
- Bridge structure design
- Prestressed concrete structures
- Foundation design and analysis
- Fire-resistant concrete design

EDUCATION/ACADEMIC QUALIFICATIONS

Newcastle University

Newcastle, United Kingdom

Ph.D. in Civil (Structural) Engineering

2019 – 2024

Research Topic: **Performance of Cement Paste with Polypropylene Fibre and Powder at High Temperatures.**

Focused on enhancing the performance of cement paste by using ultraviolet light treatment on polypropylene to reduce the impact of fire on concrete structures.

Sharda University

Greater Noida, Uttar Pradesh, India

M.Tech. in Civil Engineering (Structural Engineering Option)

2014 – 2015

Research Topic: **Comparative Study of Elastic and Plastic Analysis of Indian Steel Members Subjected to Fire Using SAFIR and ANSYS Software.**

Kano University of Science and Technology, Wudil

Kano, Nigeria

B.Eng. in Civil Engineering

2006 – 2011

Research Topic: **Computer-Aided Analysis and Design of Cantilever Retaining Wall.**

ADDITIONAL EDUCATION/TRAINING

- Diploma in Project and Construction Management, Bridge Institute of Management and Engineering, Delhi, India, July 2014 – April 2015.
- Certificate in STAAD Pro, Sai Ram Computer Center, Gamma I Greater Noida UP, India, 15th March – 17th April 2015.
- Certificate in Revit Architect, Sai Ram Computer Center, Gamma I Greater Noida UP, India, 15th March – 17th April 2015.
- National Qualification Certificate in Understanding Stewarding at Spectator Events, with Industry Qualifications, August 2019.
- NCFE Level 1 Award in Interpersonal Skills with NCFE, August 2019.
- Certificate in Immediate Life Support (ILS), with Primary Care Recruitment Agency, May 2019.
- Introduction to Learning and Teaching (Seminar), Newcastle University, March 2019.
- Introduction to Learning and Teaching (Demonstrator), Newcastle University, June 2019.

ADDITIONAL ONLINE EDUCATION/MODULES/WEBINARS

- Certificate of Participation on Artificial Intelligence in Business Models – Applications and Research Directions, Department of Research and Publication, A2Z EdulearningHub LLP, 19th May 2022.
- Certificate of Participation on Impact of Automation and Control System of Building and Industry on Energy Conservation, IEEE and PES, 6th May 2022.
- Certificate of Participation in International Webinar on Strengthening Research Ethics Using Plagiarism Tools, Universitas Gadjah Mada, Jakarta, 31st March 2022.
- Certificate of Participation on Redefining Social Responsibility and Ethical Leadership, Center for Management Studies, JAIN University, 2nd – 10th August 2021.
- Certificate of Participation on Water Security for Cities through Urban Water Management, Department of Humanities and Applied Science and Civil Engineering, Manda Institute of Technology, Bikaner, April 2021.
- Certificate of Participation on Planning and Drafting of Approval Drawing, Department of Civil Engineering, Kings College of Engineering, Punalkulam, March 2021.

- Certificate of Participation on Financial Empowerment through Financial Awareness, S.S. Jain Subodh P.G. (Autonomous) College, Jaipur, Rajasthan, in collaboration with Association of Mutual Funds in India, January 2021.
- Certificate of Participation on Sustainable Business Management Practices and Social Innovation, Student Research and Development Cell, Center for Management Studies, JAIN University, January 2021.
- Certificate of Participation on Decoding Entrepreneurship, School of Management Studies, Sathyabama Institute of Science and Technology, in collaboration with Tamilnadu Advanced Technical Training Institute, December 2020.
- Certificate of Attendance on “Getting the Most out of Scopus,” Researcher Academy Elsevier at Newcastle University, 2nd December 2020.
- Certificate of Completion on “Innovation in Concrete Construction,” Civil Engineering Department at Gandhinagar Institute of Technology, November 2020.
- Certificate on Artificial Intelligence Myth and Realities, Maths Aspirant WhatsApp Groups, Career Development Centre Perambra, Kozhikoda, Kerala, November 2020.
- Certificate of Participation on Magnetic Adsorbent and their Applications in Wastewater Treatment and Metals Recovery, Mineral Resources Management Research and Training Center, Caraga State University, Philippines, October 2020.
- Certificate of Attendance on “Aligning Yourself to the Publishing Process,” Researcher Academy Elsevier, 23rd and 24th July 2020.
- Certificate of Completion on “Standing up for Science,” Researcher Academy Elsevier, 31st March 2020.
- Certificate of Completion on “Using Proper Manuscript Language,” Researcher Academy Elsevier, 11th March 2018.
- Certificate of Completion on “How to Turn Your Thesis into an Article,” Researcher Academy Elsevier, 23rd February 2018.
- Certificate of Completion on “How Researchers Benefit from Citing Data,” Researcher Academy Elsevier, 23rd February 2018.

PROFESSIONAL EXPERIENCE

- **Lecturer II**, Kano University of Science and Technology, Wudil, Kano State (April 2016 – Present)
 - Lecturing undergraduate Civil Engineering courses.
 - Supervision of undergraduate projects.
- **Civil Engineer I**, Kano State Housing Corporation, Zaria Road, Kano, Nigeria (August 2013 – April 2016)
 - Supervised construction of houses under Kano State Government.
- **Site Engineer**, Ciroco Nigeria Limited, Kano State, Nigeria (February 2011 – June 2012)
 - Coordinated and supervised construction of additional classrooms in primary schools in Kano State, funded by the Japanese Government.
- **Site Engineer**, SKY Construction Nigeria Limited, Kano, Nigeria (June 2009 – December 2009)
 - Assisted in supervising road construction along Tarauni Market, Kano State.
- **Site Engineer**, SKY Construction Nigeria Limited, Kano, Nigeria (June 2008 – September 2008)
 - Assisted in supervising road construction from Kwanar Dawaki to Dawakin Kudu Local Government, Kano State.

MAJOR SKILLS & ACHIEVEMENTS

- Proficiency in Microsoft Office tools (Word, PowerPoint, Excel) and Sigma Plot.
- Designed software capable of designing and analyzing cantilever retaining walls (2010).
- Awarded second-best graduating student at Kano University of Science and Technology, Department of Civil Engineering (2011).

RESEARCH PROJECTS

1. **Performance of Cement Paste with Polypropylene Fibre and Powder at High Temperature**
PhD Thesis, Newcastle University, Newcastle upon Tyne, United Kingdom, 2023.
2. **Comparative Study of Elastic and Plastic Analysis of Indian Steel Members Subjected to Fire Using SAFIR and ANSYS Software**
MTech Thesis, Sharda University, Greater Noida, Uttar Pradesh, India, November 2015.
3. **Comparative Analysis and Design of an Industrial Steel Building in STAAD Pro Using Indian Code (IS800) and EUROCODE (EN1993:2005)**
MTech Design Project, Sharda University, Greater Noida, Uttar Pradesh, India, 2015.
4. **Ductile Fracture of Steel under Monotonic and Cyclic Loading**
MTech Seminar, Sharda University, Greater Noida, Uttar Pradesh, India, 2015.
5. **Computer-Aided Analysis and Design of Cantilever Retaining Wall**
BEng Research Project, Kano University of Science and Technology, Wudil, Kano, Nigeria, May 2011.

JOURNAL ARTICLES

1. **Influence of Polymer 3D Printing on the Durability and Thermal Performances of Infrastructural Building**
Daha Shehu Aliyu; Mahmoud Murtala Farouq; Haruna Ibrahim; Chandra Kumar Dixit; Gnanell Muthu; Sathish Kumar Ramachandran; Ahmed Ravitheja. (2024). AIP Conference Proceedings, Proceedings of the Fourth International Conference on Advances in Manufacturing Technology (ICAMT2022), Volume 2937, 020026. <https://doi.org/10.1063/5.0218105>
2. **A Review on the Effect of Graphene Nanostructures on the Mechanical Behaviour of Cement Composite**
Ronald Migue; Hernandez Vasquez; Mahmoud Murtala Farouq; Daha Shehu Aliyu; Haruna Ibrahim; Vishnu Dinesh; A. N. Shankar. (2024). AIP Conference Proceedings, Proceedings of the Fourth International Conference on Advances in Manufacturing Technology (ICAMT2022), Volume 2937, 020027. <https://doi.org/10.1063/5.0218923>
3. **Critical Review on the Impact of Nanotechnology in Concrete Materials**
A. N. Shankar, Mahmoud Murtala Farouq, Francis Kwesi Bondinuba, Vinay Kumar Singh, Daha Shehu Aliyu, V. Y. Ganvir. (2022). Advances in Science and Technology, ISSN: 1662-0356, Vol. 117, pp. 17-24.
4. **Utilization of E-Waste as a Concrete Mixture for Infrastructural Buildings**
R. Raffik, Harish Sharma, Daha Shehu Aliyu, Francis Kwesi Bondinuba, Kannadasan B., Rabah Mahmoud Ahmad Ismail. (2022). Materials Science Forum, ISSN: 1662-9752, Vol. 1068, pp. 47-53.
5. **Prediction of compressive strength of lightweight concrete made with partially replaced cement by animal bone ash using artificial neural network**
Daha Shehu Aliyu, Salim Idris Malami, Faiz Habib Anwar, Mahmud Murtala Farouk, Muwaffaq Sufyan Labbo, S.I.Abbas. 2021 1st International Conference on Multidisciplinary Engineering and Applied Science (ICMEAS). (978-1-6654-3493-5/21/31.00 ©2021 IEEE) 2021
6. **Emerging evolutionary algorithm integrated with kernel principal component analysis for modeling the performance of water treatment plant**
Abba, S.I., Pham, Q.B., Usman, A.G., Linnh, N.T.T., Aliyu, D.S., Nguyen, Q. and Bach, Q.V. 2020 “”. Journal of water process Engineering, 33, 101081

7. **Compressive Strength of Lightweight Concrete and Benefit of Partially Replacing Cement by Animal Bone Ash (ABA)**
F. H. Anwar, S. I. Malami, Z. B. Baba, M. M. Farouq, M. S. Labbo, Daha S. Aliyu, A. B. Umar. (2019). Journal of Emerging Technologies and Innovative Research, ISSN-2349-5162, Volume-6, Issue-6, June 2019, pp. 554-560.
8. **Stabilization of Lateritic Soil Using Powdered Locust Bean Pod (MAKUBA)**
Daha S. Aliyu, Ma'aruf A, M. M. Farouq, S. U. Dawusu. (2018). International Journal of Engineering Science Research, ISSN 2277-2685, Special Issue/Article No-46, pp. 249-255.
9. **Ground-Borne Vibration Transmission on Structures (Effect and Control): A Review**
H. Ibrahim, Daha S. Aliyu, Ma'aruf A., M. M. Farouq. (2018). International Journal of Engineering Science Research, ISSN 2277-2685, Special Issue/Article No-1, pp. 1-7.
10. **Behavior of Reinforcement in Reinforced Concrete Beam Subjected to Fire on Tensile Strength**
Daha S. Aliyu, M. M. Farouq, M. S. Labbo, F. H. Anwar, Z. B. Baba, M. U. Bayi. (2017). American Journal of Engineering Research, e-ISSN: 2320-0847, p-ISSN: 2320-0936, Volume-6, Issue-10, 2017, pp. 163-171.
11. **Implementation of Environmental Management System in Construction Industry**
M. M. Farouq, Umar F. Lawan, Nura Garba, F. H. Anwar, Z. B. Baba, M. S. Labbo, Daha S. Aliyu. (2017). IOSR Journal of Mechanical and Civil Engineering (IOSR-IMCE), e-ISSN: 2278-1684, p-ISSN: 2320-334X, Volume-14, Issue-5, Ver. IV, Sep.-Oct. 2017, pp. 33-38.
12. **Road Maintenance Management in Kano State, Nigeria: Case Study of Kano Metropolitan**
M. M. Farouq, F. H. Anwar, Z. B. Baba, M. S. Labbo, D. S. Aliyu. (2017). Journal of Mechanical and Civil Engineering, e-ISSN: 2278-1684, p-ISSN: 2320-334X, Volume 14, Issue 3, Ver. III, May-June 2017, pp. 50-62.
13. **Transmission of Ground Vibration on Roadside Structures**
D. S. Aliyu, Y. A. Abdu, D. A. Yusuf. (2016). European Journal of Advances in Engineering and Technology, Vol. No. 3(7), pp. 43-46. (ISSN: 2394-658X).
14. **Comparative Study of Elastic and Plastic Analysis of Indian Steel Members Subjected to Fire Using ANSYS and SAFIR Software**
D. S. Aliyu, H. Ibrahim, H. H. Ali. (2015). International Journal of Advance Research in Science and Engineering, IJARSE Press, India, Vol. No. 4, pp. 175-185. (ISSN: 2319-8354).
15. **Vibrational Control of Frame Structures Using Tuned Mass Dampers**
H. Ibrahim, D. S. Aliyu, H. H. Ali. (2015). International Journal of Advance Research in Science and Engineering, IJARSE Press, India, Vol. No. 4, pp. 186-196. (ISSN: 2319-8354).
16. **Assessment of Ductile Fracture of Steel under Monotonic and Cyclic Loading**
D. S. Aliyu, H. M. Sabo. (2015). Journal of Civil Engineering and Environmental Technology, Krishi Sanskriti Publications, Print ISSN: 2349-8404, Online ISSN: 2349-879X, Volume 2, Number 12, pp. 93-95.

LIST OF CONFERENCES

1. **Design for Construction Productivity Conference**
Organized by the Institute of Structural Engineering (IStructE), International Headquarters, 47-58 Bastwick Street, London, EC1V 3PS.
2. **Postgraduate Research Conference**
Organized by the School of Engineering, Newcastle University, United Kingdom.
Presentation Title: *The Use of UV-Treated Polypropylene Fibre in Improving Compressive Strength of Cement Paste at High Temperature.*
Year: 2020/2021.
3. **2nd International Conference on Science, Technology, and Management**
Organized by Conference World at Delhi University, New Delhi, India.
Date: 27th September 2015.

4. **7th International Conference on Emerging Technology in Civil Engineering, Architecture, and Environmental Engineering for Global Sustainability**
Organized by Krishi Sanskriti at Jawaharlal Nehru University, New Delhi, India.
Date: 4th–5th April 2015.

LIST OF LOCAL CONFERENCES AND WORKSHOPS

1. **First International Conference on Civil and Environmental Engineering for Resilient, Smart, and Sustainable Solutions**
Organized at Prince Muhammad bin Fahad University, 3rd–5th November 2024.
2. **Introduction to Teaching and Learning One-Day Workshop – Demonstrator**
Conducted at Newcastle University, 14th June 2019.
3. **Introduction to Teaching and Learning One-Day Workshop – Seminar**
Conducted at Newcastle University, 1st March 2019.
4. **Research Symposium and Exposition**
Presentation Title: *Ductile Fracture of Steel under Cyclic Loading*.
Organized at Sharda University, Uttar Pradesh, India, 28th March 2015.
5. **Workshop on "Patent, Intellectual Property Rights, and Ethics"**
Conducted by the School of Basic Science and Research, Sharda University, Greater Noida, India, March 2015.
6. **Workshop on "Civil Design"**
Conducted at Cetpa Infotech Pvt. Ltd., Noida Sector 15, India, 15th March 2015.
7. **Workshop on "Water Treatment Plant"**
Organized by Delhi Jal Board, Government of India.
8. **Workshop on "Monitoring of Concrete Structures – NDT Approach"**
Held on 3rd February 2015 at Sharda University, Greater Noida, India.

PROFESSIONAL MEMBERSHIP/CERTIFICATION

1. **Member, Institution of Structural Engineers (IStructE)**
Member ID: 082013179.
2. **Member, Institute of Engineering and Technology (MIET)**
Member ID: 1101215502.
3. **Registered Member, Council for the Regulation of Engineers in Nigeria (COREN)**
Registration Number: R. 32,219.
4. **Registered Member, Nigerian Institute of Civil Engineering (NICE)**
Registration Number: C. 04676.
5. **Affiliated Member, American Society of Civil Engineers (ASCE)**
Membership ID: 000011901311.
6. **Member, Institution of Civil Engineers (ICE)**
Membership ID: 2086911.
7. **Member, International Association of Engineers (IAENG)**
Member ID: 374109.
8. **Member, Universal Association of Civil, Structural, and Environmental Engineers (UACSE)**
Membership ID: AM10100058308 under the Institute of Registered Doctors and Engineers (TheIRED).
9. **Open Research and Contributor ID (ORCID)**
ORCID ID: 0000-0002-9862-6962.

TEACHING EXPERIENCE

1. **Design of Structural Element III (CIV5404)**
Academic Year: 2015-2016.
2. **Engineer in Society I (ENG2101)**
Academic Year: 2015-2016.
3. **Engineer in Society I (ENG2101)**
Academic Year: 2016-2017.
4. **Engineer in Society I (ENG2101)**
Academic Year: 2017-2018.
5. **Design of Structural Element I (CIV3306)**
Academic Year: 2016-2017.

ADMINISTRATIVE RESPONSIBILITY

1. **Level Coordination of Undergraduate Students**
Duration: 2016 to January 2019.

UNDERGRADUATE PROJECT SUPERVISION

1. **Behavior of Reinforcement in Reinforced Concrete Beam Subjected to Fire on Tensile Strength**
Student: Mustapha Umar Bayi (2017)
2. **Stabilization of Lateritic Soil Using Powdered Locust Bean Pod ‘Makuda’**
Student: Surajo Umar Dawusu (2017)
3. **Effect of Gamba Grass (Andropogon Gayanus) Ashes in Concrete**
Student: Sani Maitama (2017)
4. **Performance of Reclaimed Asphalt Pavement as Partial Replacement to Coarse Aggregate in Concrete**
Student: Kabiru Imran (2017)
5. **Performance of Animal Bone Ashes and Wood Ashes as Partial Replacement of Cement in Concrete**
Student: Issa Abdulazeez Kayode (2018)
6. **Appraisal of Work Breakdown Structure (WBS) Process in the Success of Planning and Scheduling of Road Projects in Kano State**
Student: Muhammad Abubakar Suleiman (2018)

POSITION HELD

1. **Treasurer, National Association of Civil Engineering Students**
Kano University of Science and Technology, Wudil Chapter, 2008–2010
2. **Site Engineer, Ciroco Nigeria Ltd**
Sharada Phase II, February 2011–June 2012

COMMITTEE MEMBERSHIP

1. **Member, Zumunta Youth Development Association**
Kurna Asabe, Dala Local Government, Kano State

APPOINTMENT

1. **Appointed as a Moderator by “National Board for Arabic and Islamic Studies” (NABAIS)**
Nigeria, May 2017

AWARD

1. **Petroleum Technology Development Fund (PTDF) Scholarship for PhD.**
January 2019.
2. **Kano State Scholarship Award for Master's Degree.**
February 2014 to October 2015.
3. **Student Appreciation Award for Level Coordination by Level 500 Students.**
January 2017.

COMMUNITY SERVICE

1. **National Youth Service Corps (NYSC)**
June 2011–July 2012.

HOBBIES

1. **Travelling**
2. **Football**
3. **Reading**

REFERENCES

1. **Dr. Colin Davie**
Civil Engineering
School of Engineering
Drummond Building (Rm 3.10)
Newcastle University
Newcastle upon Tyne, UK
NE1 7RU
colin.davie@newcastle.ac.uk
+44(0)1912086458
2. **Prof. Sean Wilkinson**
Civil Engineering
School of Engineering
Drummond Building (Rm 2.08)
Newcastle University
Newcastle upon Tyne, UK
NE1 7RU
sean.wilkinson@ncl.ac.uk
+44 (0) 191 208 8876
3. **Engr. Prof. Abubakar Isma'il**
Dept. of Water Resources Engineering
Ahmadu Bello University, Zaria
Nigeria
aismail@abu.edu.ng, abuismail1@gmail.com
+234-8033176363