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Google Scholar Profile: <https://scholar.google.co.za/citations?user=7amO9kAAAAAJ&hl=en>

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Education

Ph.D., Civil Engineering, University of Johannesburg, South Africa; 2018 – 2020

Masters., Construction Management, University of Johannesburg, South Africa; 2016 – 2017

B.Eng., Civil Engineering, Nnamdi Azikiwe University, Nigeria; 2005 – 2010

Background and Experience Summary

- Curriculum development to enhance the learning outcomes of engineering students.
- Broad understanding of conducting both quantitative, qualitative and mixed-method research.
- Academic experience involving skills development and graduate employability.
- Conducting research in the area of sustainable construction and construction digitalization.

Academic Appointments

- Clinical Assistant Professor at the Engineering Education Transformations Institute, College of Engineering, University of Georgia, 2024 – Date.
- Post-Doctoral Research Associate with the Institute for Resilient Infrastructure Systems, College of Engineering, University of Georgia. Responsibilities include co-developing and delivering curriculum modules on nature-based solutions and natural infrastructure, organizing and coordinating the group's training and workforce development efforts and planning and facilitating meetings and coordinating across research groups, 2022 – 2024.
- Assistant Instructor for ENGR 8990 - Nature-based Infrastructure Engineering and Design (Spring 2023), College of Engineering, University of Georgia – 2023.
- Assistant Instructor for ENGR 8990 CRN 58680 - Field Experiences in Natural Infrastructure (Fall, 2023), College of Engineering, University of Georgia – 2023.
- Two-year Post-Doctoral Research Fellowship, University of Johannesburg. Research responsibilities involved engaging with quantitative, qualitative and mixed-method approaches in the engineering education discourse to improve graduate employability and to ensure industry readiness after graduation, 2020 – 2022.
- Research supervisor, CIDB Centre of Excellence, Faculty of Engineering and the Built Environment at the University of Johannesburg. Responsibilities include supervising undergraduate and graduate students in their respective research work, 2018 – Date.
- Part-time Lecturer, Department of Civil Engineering Technology (DCET), Doornfontein Campus, University of Johannesburg. Responsibilities include teaching undergraduate courses in *Project Management*, *Research Methodology*, *Water Reticulation Design* and *Sustainable Construction*, from February 2019 – June 2022.
- Part-time Lecturer, Department of Construction and Management & Quantity Surveying, Auckland Park Campus, University of Johannesburg. Responsibilities include teaching *Project Planning* and *Scheduling* and *Resource Management*, 2018 – June 2022.
- Tutor, Department of Civil Engineering Technology (DCET), Doornfontein Campus, University of Johannesburg, Johannesburg, South Africa, February – June 2018
- Teaching Assistant, Civil Engineering Department, Nnamdi Azikiwe University, March 2009 – February 2010.

Other Positions and Employment

- Junior Civil Engineer, Federal University of Technology, Minna. Responsible for coordinating multi-disciplinary project design teams to achieve quality and on-time delivery of design documents. Taught evening undergraduate courses in project management at Federal University of Technology, Minna, Civil Engineering Department, 2013 – January 2016.
- Junior Civil Engineer, Ministry of Works and Housing, Minna. Responsible for performing regular site visits, inspections, audits and surveys as well as overseeing construction works being completed on-site, 2011 – 2012.
- Civil Engineering Assistant, Physical Planning and Development Unit, Nnamdi Azikiwe University. (6 months Industrial Training) March 2009 – August 2009.

Scholarly and Professional Activities

Publications

Book (Peer-Reviewed)

1. **Aliu, J.**, Aigbavboa, C., and Thwala, W., (2021). A 21st Century Employability Skills Improvement Framework for the Construction Industry. *Routledge*. DOI: <https://doi.org/10.1201/9781003137504>

Book chapters (Peer-Reviewed)

2. Aigbe, F., Aigbavboa, C., **Aliu, J.** and Amusan, L., 2025, February. Gig Workforce Management in South Africa: An Employee Share Ownership Approach. In *Construction Industry Development Board Postgraduate Research Conference* (pp. 171-179). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-99204-9_15
3. Akanyawie, G.A., Aigbavboa, C., **Aliu, J.** and Aghimien, D., 2025, February. Building Green: Unveiling the Drivers of Nature-Based Solutions in the Ghanaian Construction Industry. In *Construction Industry Development Board Postgraduate Research Conference* (pp. 354-368). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-99204-9_31
4. Ilesanmi, O.O., Oke, A.E., Moyanga, D.T., **Aliu, J.** and Aigbavboa, C., 2025. Key Barriers to the Extensive Adoption of Robotics in the Nigerian Built Environment. *Addressing Environmental Challenges With AI, Robotics, and Augmented Reality*, pp.197-224. DOI: <https://doi.org/10.4018/979-8-3373-1892-9.ch008>
5. Oke, A.E., **Aliu, J.**, Abayomi, T., Ilesanmi, O.O., Stephen, S.S., Aghimien, D.O. and Aigbavboa, C., 2025. An Investigation of the Potential Benefits of Gamification in the Nigerian Construction Industry. In *Applications of Immersive Technology in Architecture, Engineering and Construction* (pp. 257-267). Routledge. <https://doi.org/10.1201/9781032662909-26>
6. Akinradewo, O., Aigbavboa, C., Aghimien, D., Rocha, D., Adekunle, S. and **Aliu, J.**, 2024, August. Augmented Reality Technologies in Education and Training: A Pathway to Enhancing the Built Environment. In *International Conference on Computing in Civil and Building Engineering* (pp. 509-519). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-87364-5_43
7. Ilesanmi, O.O., Oke, A.E., **Aliu, J.** and Oluwaleye, O.R., 2025. Post-Occupancy Evaluation for Sustainable Performance of Green Buildings: A Case Study of a Selected Project. In *Sustainable Communities through Digital Transformation* (pp. 215-231). Routledge. <https://doi.org/10.1201/9781003380559-13>
8. Ilesanmi, O.O., Oke, A.E., **Aliu, J.** and Atolagbe, J.O., 2025. Assessing the Awareness and Adoption of Robotics/Automation in Foreign and Indigenous Firms in Nigeria. In *Sustainable Communities through Digital Transformation* (pp. 44-64). Routledge. <https://doi.org/10.1201/9781003380559-4>
9. Ilesanmi, O.O., Oke, A.E., Moyanga, D.T. and **Aliu, J.**, 2024. Unveiling the Imperatives: Drivers for Incorporating Smart Building Technologies in the Construction Sector in Nigeria. In *Industry 5.0 and Emerging Technologies: Transformation Through Technology and Innovations* (pp. 199-215). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-70996-8_10
10. Aigbavboa, C., **Aliu, J.** and Thwala, W.D., 2023. A Review of the Evolution of Project Management in South Africa. *Building a Body of Knowledge in Project Management in Developing Countries*, pp.792-819. https://doi.org/10.1142/9789811224720_0024
11. Ebekozien, A., Aigbavboa, C., **Aliu, J.**, Thwala, W.D. and Emuchay, F.E., 2023, April. Improving Safety on Building Project Sites: The Role of Sensor-Based Technology. In *Towards a Sustainable Construction Industry: The Role of Innovation and Digitalization: Proceedings of 12th Construction Industry Development Board (CIDB) Postgraduate Research Conference* (pp. 23-32). Cham: Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-031-22434-8_3

12. Adekunle, S.A., Ikuabe, M., **Aliu, J.**, Ogunbayo, B., Aigbavboa, C., Oyewo, W.O. and Ejohwomu, O., 2023. Understanding Safety of Construction Sites: Construction Site Workers' Experience. In *Emerging Debates in the Construction Industry* (pp. 292-306). Routledge.
13. **Aliu, J.** and Aigbavboa, C., 2022. Examining Pedagogical Approaches in Developing Employability Skills in the Wake of the COVID-19 Pandemic. In *Smart and Sustainable Technology for Resilient Cities and Communities* (pp. 11-28). Springer, Singapore. https://link.springer.com/chapter/10.1007/978-981-16-9101-0_2
14. **Aliu, J.** and Aigbavboa, C., 2022. Relating Work-Integrated Learning to Employability Skills in the Post-COVID-19 Era. In *Smart and Sustainable Technology for Resilient Cities and Communities* (pp. 29-46). Springer, Singapore. https://link.springer.com/chapter/10.1007/978-981-16-9101-0_3
15. Okafor, C., Aigbavboa, C., **Aliu, J.** and Tanga, O., 2022, October. The Integration of 4IR Technologies in Architectural Education for Upskilling the Workforce in the Nigerian Built Environment. In International Conference on Computing in Civil and Building Engineering (pp. 227-241). Cham: Springer Nature Switzerland. https://link.springer.com/chapter/10.1007/978-3-031-32515-1_16
16. **Aliu, J.**, Aigbavboa, C. and Oke, A., 2021. Examining Undergraduate Courses Relevant to the Built Environment in the 4IR Era: A Delphi Study Approach. In *Emerging Research in Sustainable Energy and Buildings for a Low-Carbon Future* (pp. 195-215). Springer, Singapore. https://link.springer.com/chapter/10.1007/978-981-15-8775-7_12
17. **Aliu, J.** and Aigbavboa, C., 2021. Reviewing Problem-Solving as a Key Employability Skill for Built Environment Graduates. In *Collaboration and Integration in Construction, Engineering, Management and Technology* (pp. 399-403). Springer, Cham. <https://www.springerprofessional.de/en/reviewing-problem-solving-as-a-key-employability-skill-for-built/18703818>
18. **Aliu, J.** and Aigbavboa, C., 2018, July. Upscaling construction education: the role of construction site experiential learning. In *International Conference on Applied Human Factors and Ergonomics* (pp. 472-479). Springer, Cham. https://link.springer.com/chapter/10.1007/978-3-319-93882-0_45
19. **Aliu, J.** and Aigbavboa, C., 2018, September. Introduction of construction experience to the classroom: What approaches should be adopted? In *International Symposium on Emerging Technologies for Education* (pp. 284-294). Springer, Cham. (LNCS, volume 10676). https://link.springer.com/chapter/10.1007/978-3-319-71084-6_32

Journals (Peer-Reviewed)

1. Aghimien, D. and **Aliu, J.**, 2025. Nature-Based Solution for Sustainable Urban Pavement Construction in South Africa. *Urban Science*, 9(11), p.479. <https://doi.org/10.3390/urbansci9110479>
2. Seun Oke, O., **Aliu, J.O.**, Chukwuma, N.K. and Oke, A.E., 2025. Uncovering the drivers of green wall system adoption in construction: insights from a developing country. *International Journal of Construction Management*, pp.1-15. <https://doi.org/10.1080/15623599.2025.2580342>
3. Ilesanmi, O.O., Oke, A.E., Moyanga, D.T., **Aliu, J.O.** and Ojo, L.D., 2025. Innovative strategies to prevent flooding in buildings and infrastructure in Nigeria. *International Journal of Disaster Resilience in the Built Environment*. <https://doi.org/10.1108/IJDRBE-03-2025-0040>
4. Babalola, H.I. and **Aliu, J.O.**, 2025. Lean construction practices for enhancing project delivery in the construction industry: examining the beneficial outcomes. *International Journal of Construction Management*, pp.1-15. <https://doi.org/10.1080/15623599.2025.2543567>
5. **Aliu, J.O.**, Oke, A.E., Aghimien, D., Adeniyi Adekunle, S., Aigbavboa, C. and Ebekozi, A., 2025. A Q methodology study on factors motivating adaptive reuse in the Nigerian construction industry. *International Journal of Building Pathology and Adaptation*, pp.1-21. <https://doi.org/10.1108/IJBPA-04-2025-0081>
6. Feyijimi, T.R., **Aliu, J.O.**, Oke, A.E. and Aghimien, D., 2025. ChatGPT's Expanding Horizons and Transformative Impact Across Domains: A Critical Review of Capabilities, Challenges, and Future Directions. *Computers*. doi: <https://doi.org/10.20944/preprints202507.0429.v1>
7. **Aliu, J.** (2025). Generative AI for Advanced Security Frameworks in Transportation Networks (Institute for Homeland Security Report No. 2025-1012). Institute for Homeland Security. https://ihsonline.org/Portals/0/Tech%20Papers/2025/Aliu_Generative_AI_for_Advanced_Security_Frameworks_in_Transportation_Networks.pdf?ver=QyafABfSL2Z5tL-lrYJBhA%3d%3d
8. Adejumo, A.M., Oke, A.E., **Aliu, J.**, Kofi, A., Chan, A.P. and Duyile, A.S., 2025. Smart Wearable Devices For Nigerian Construction Health And Safety: Awareness and Usage from Stakeholders' perspective. *International Journal of Environmental Design and Construction Management*. <https://doi.org/10.1108/FEDE-11-2022-0041>
9. Olonilua, O., and **Aliu, J. O.** (2025). Assessing workforce training strategies in critical infrastructure: Insights and recommendations (Report No. IHS-2025-1000). <https://hdl.handle.net/20.500.11875/5062>

10. Aliu, J.O., McKay, S.K., Welch-Devine, M. and Bledsoe, B., 2025. Assessing outcomes of a field-oriented course in natural infrastructure. *International Journal of Sustainability in Higher Education*. <https://doi.org/10.1108/IJSHE-07-2024-0484>
11. Kelvin Ibrahim, M. and Aliu, J.O., 2025. Bridging the digital divide: strategies for successful technology implementation in the UK construction sector. *International Journal of Construction Management*, pp.1-16. <https://doi.org/10.1080/15623599.2025.2541721>
12. Oke, O.S., Aliu, J.O., Ekundayo, D., Oke, A.E. and Chukwuma, N.K., 2025. Assessing the Adoption and Feasibility of Green Wall Systems in Construction Projects in Nigeria. *Sustainability*, 17(15), p.7126. <https://doi.org/10.3390/su17157126>
13. Aliu, J.O., Omoregie Aghimien, D., Emmanuel Oke, A., Ebekozi, A. and Aigbavboa, C., 2025. Gamification as a Catalyst for Effective Construction Management Education. *International Journal of Human-Computer Interaction*, pp.1-22. <https://doi.org/10.1080/10447318.2025.2526588>
14. Oke, A.E., Aliu, J.O., Firdaus, R.B.R., Precious Adebisi, B. and Ramabodu, M.S., 2025. Implementing adaptive reuse in Nigeria: challenges and pathways to low-carbon urban and rural development. *International Journal of Construction Management*, pp.1-15. <https://doi.org/10.1080/15623599.2025.2523927>
15. Feyijimi, T.R., Aliu, J.O., Oke, A.E. and Aghimien, D., 2025. ChatGPT's Expanding Horizons and Transformative Impact Across Domains: A Critical Review of Capabilities, Challenges, and Future Directions. <https://doi.org/10.3390/computers14090366>
16. Oke, A.E., Akintola, O.A., Oyewole, M.O., Aliu, J. and Omoyajowo, N.I., 2025. Study on the Awareness and Practice of Circular Economy Principles Among Construction Stakeholders in Nigeria. *Construction Economics and Building*, 25(2). <https://doi.org/10.5130/AJCEB.v25i2.9126>
17. Ebekozi, E.O., Ebekozi, A., Hafez, M., Aigbavboa, C., Nwaole, A.N.C., Samsurijan, M.S., Aliu, J.O., Ayo-Odirifi, S.O., Adekunle, S.A. and Akinradewo, O., 2025. Modelling of government flood-related policy in Sustainable Development Goal 11: evidence from Nigeria using “system theory”. *International Journal of Building Pathology and Adaptation*. <https://doi.org/10.1108/IJBPA-02-2025-0036>
18. Ebekozi, A., Aigbavboa, C., Hafez, M., Nwaole, A.N.C., Samsurijan, M.S., Ayo-Odifiri, S.O., Chukwuma-Uchegbu, M.I., Ereimiokhale, J.I., Ebekozi, E.O., Afonne, U. and Aliu, J., 2025. Developing a framework for mitigating violence and extortion from sub-urban inter-communal residential land conflicts via soft system methodology. *Engineering, Construction and Architectural Management*. <https://doi.org/10.1108/ECAM-04-2025-0563>
19. Abera, L.E., Jumani, S., van Rees, C.B., Krishnaswamy, J., Seigerman, C.K., Nelson, D.R., Hallemeier, J., Mulatu, D.W., Arora, R., Viscardo Sesma, M.P. and Asnake, K., 2025. Integrating Nature-based Solutions for urban water security in global south. *PLOS Water*, 4(6), p.e0000372. <https://doi.org/10.1371/journal.pwat.0000372>
20. Ebekozi, A., Aigbavboa, C., Ahmed, M.A.H., Thwala, W.D., Samsurijan, M.S., Aliu, J., Adekunle, S.A., Akinradewo, O. and Adoye, J., 2025. Investigating personal protective equipment awareness of artisans in the informal sector: issues and measures to improve achieving SDG 3. *International Journal of Building Pathology and Adaptation*, 43(8), pp.59-74. <https://doi.org/10.1108/IJBPA-04-2024-0083>
21. Oyedirin, A.O., Oke, A.E., Ikuabe, M.O., Aliu, J.O., Adeosun, F.E. and Aigbavboa, C.O., 2025. Exploring application areas of cyber-physical systems in the construction industry: a case of Nigeria. *International Journal of Construction Management*, pp.1-13. <https://doi.org/10.1080/15623599.2025.2482216>
22. Oke, A.E., Aliu, J.O., Tamunosa Ojuronbe, E., Aigbavboa, C.O., Aghimien, D.O. and Ebekozi, A., 2025. Investigation of Core and Future Competencies Needed for Quantity Surveyors in Nigeria. *International Journal of Construction Education and Research*, pp.1-19. <https://doi.org/10.1080/15578771.2025.2485042>
23. Ebekozi, A., Ebekozi, E.O., Ahmed, M.A.H., Aigbavboa, C., Samsurijan, M.S., Nwaole, A.N.C., Ebekozi, O.A., Aliu, J.O., Edigan, B.I. and Shaib, O.I., 2025. Affordable housing in Nigeria's slums: combating infectious diseases and advancing SDG 3. *Property Management*, (ahead-of-print). <https://doi.org/10.1108/PM-08-2024-0092>
24. Oke, A.E., Aliu, J.O., Timothy Jesudaju, O., Thomas Fagbe, A., Aghimien, D. and Aigbavboa, C.O., 2025. Building a sustainable future: the role of digitalization in Nigerian heavy engineering projects. *Engineering, Construction and Architectural Management*. <https://doi.org/10.1108/ECAM-08-2024-1043>
25. Oke, O.S., Aliu, J.O., Duduyegbe, O.M. and Oke, A.E., 2025. Assessing Awareness and Adoption of Green Policies and Programs for Sustainable Development: Perspectives from Construction Practitioners in Nigeria. *Sustainability (2071-1050)*, 17(5). <https://doi.org/10.3390/su17052202>
26. Olonilua, O. and Ogbeleakhu Aliu, J., 2025. Reviewing the critical role of coping strategies in enhancing mental health and resilience in disaster survivors. *Environmental Research: Health*, 3(2), p.025006. <https://doi.org/10.1088/2752-5309/adb6cc>

27. Oke, O.S., **Aliu, J.O.**, Oke, A.E., Ekundayo, D. and Duduyegbe, O.M., 2025. Green Building Practices: Fuzzy Synthetic Evaluation of the Drivers of Deforestation and Forest Degradation in a Developing Economy. *Sustainability*, 17(4), p.1538. <https://doi.org/10.3390/su17041538>
28. Ebekozen, A., Aigbavboa, C., Ahmed, M.A.H., Samsurijan, M.S. and **Aliu, J.**, 2025. Appraising construction artisans health insurance enrolment to achieve sustainable development goal 3 in the informal sector: issues and solutions. *International Journal of Building Pathology and Adaptation*, 43(8), pp.26-40. <https://doi.org/10.1108/IJBPA-07-2024-0151>
29. Aigbe, F., Aigbavboa, C., **Aliu, J.** and Amusan, L., 2025. Gig Regulation: A Future Guide for the Construction Industry. *Buildings*, 15(3), p.490. <https://doi.org/10.3390/buildings15030490>
30. Akinradewo, O., Hafez, M., **Aliu, J.**, Oke, A., Aigbavboa, C. and Adekunle, S., 2025. Barriers to the adoption of augmented reality technologies for education and training in the built environment: a developing country context. *Technologies*, 13(2), p.62. <https://doi.org/10.3390/technologies13020062>
31. **Aliu, J.** and Aghimien, D., 2025. Harnessing Nature-Based Solutions for a Green and Sustainable Built Environment in South Africa. *Sustainability*, 17(3), p.1131. <https://doi.org/10.3390/su17031131>
32. Oke, A.E., Adekunye, O.J., Adeosun, F.E., **Aliu, J.**, Akanni, P.O., Aghimien, D. and Aigbavboa, C.O., 2025. Assessment of the challenges of integrating cyber-physical systems in Nigerian construction. *Engineering, Construction and Architectural Management*. <https://doi.org/10.1108/ECAM-07-2024-0902>
33. Jamir Singh, P.S., Oke, A.E., **Aliu, J.**, Isaiah Kayode, T., Azura Ramli, R. and Haizzan Yahaya, M., 2025. Building safely, living well: combating substance abuse in the construction industry. *International Journal of Construction Management*, pp.1-10. <https://doi.org/10.1080/15623599.2025.2455995>
34. **Aliu, J.**, Oke, A.E., Jesudaju, O.T., Akanni, P.O., Ehbohimen, T. and Dosumu, O.S., 2025. Digital Evolution in Nigerian Heavy-Engineering Projects: A Comprehensive Analysis of Technology Adoption for Competitive Edge. *Buildings*, 15(3), p.380. <https://doi.org/10.3390/buildings15030380>
35. Adekunle, S.A., Oyeyipo, O., Aigbavboa, C.O., Ebekozen, A., **Aliu, J.** and Ejohwomu, O.A. (2025), "A practical approach to teaching emerging technologies: a case of BIM", *Engineering, Construction and Architectural Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/ECAM-10-2024-1366>
36. **Aliu, J.**, Oke, A.E., Oni, S.B. and Ilesanmi, O.O. (2024), "Idea to integration: assessing mechatronics technologies in the construction industry of a developing economy", *Journal of Facilities Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JFM-09-2023-0098>
37. Ilesanmi, O.O., Moyanga, D.T., Oke, A.E. and **Aliu, J.** (2024), "Unraveling the awareness dynamics of smart building features and technologies in the Nigerian construction sector", *International Journal of Building Pathology and Adaptation*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/IJBPA-04-2024-0073>
38. Oke, A.E., **Aliu, J.**, Ekundayo, D., Oni, S.B., Ilesanmi, O.O., Aghimien, D.O. and Aigbavboa, C., 2024. Empirical Analysis of Critical Success Factors for Mechatronics Implementation in Architecture, Engineering, Construction and Operations Projects in Nigeria. *Buildings*, 14(11), p.3601. <https://doi.org/10.3390/buildings14113601>
39. Ebekozen, A., Aigbavboa, C., Thwala, W.D., Samsurijan, M.S., Ahmed, M.A.H., **Aliu, J.** and Adekunle, S.A. (2024), Appraising the application of cryptocurrency technologies in the Nigerian built environment: stakeholders' perspective, *International Journal of Building Pathology and Adaptation*, Vol. 42 No. 7, pp. 93-112. <https://doi.org/10.1108/IJBPA-04-2024-0070>
40. **Aliu, J.**, Chijioke Emere and Olusegun Oguntola, 2024. Mapping Smart City and Industry 4.0 Research in Construction-Related Studies. *Baltic Journal of Real Estate Economics and Construction Management*, vol. 12, no. 1, Riga Technical University, 2024, pp. 258-275. <https://doi.org/10.2478/bjreecm-2024-0017>
41. Ebekozen, A., Hafez, M.A., Aigbavboa, C., Samsurijan, M.S., Oke, E.A., **Aliu, J.**, Nwaole, A.N.C. and Awo-Osagie, A.I., 2024. Assessing Urban Slums in Post-COVID-19 to Achieving Sustainable Development Goal 1: Nigeria's Stakeholders Perspective Using Qualitative Approach. *Environment and Social Psychology*, 9(9). <https://doi.org/10.59429/esp.v9i9.2973>
42. Olonilua, O., & **Aliu, J.** (2024). *A Systematic Review of Challenges in Applying Immersive Technologies for Critical Infrastructure Emergency Response*. (Report No. IHS/CR-2024-1029). The Sam Houston State University Institute for Homeland Security. <https://doi.org/10.17605/osf.io/ezkpb/>
43. Oke, A.E., **Aliu, J.**, Ukaha Onyeukwu, S., Jamir Singh, P.S., Azura Ramli, R. and Shaharudin Samsurijan, M., 2024. An empirical study on the implications of social media for sustainable construction and productivity in Lagos State, Nigeria. *Construction Innovation*. <https://doi.org/10.1108/CI-03-2024-0072>
44. Oke, A.E., **Aliu, J.**, Ifedolapo Babalola, H., Jamir Singh, P.S., Tunji-Olayeni, P. and Ukaha Onyeukwu, S., 2024. From building blocks to digital networks: analyzing critical drivers for social media adoption in the

- construction sector. *International Journal of Construction Management*, pp.1-11.
<https://doi.org/10.1080/15623599.2024.2397271>
45. Aliu, J., Aghimien, D.O., Olumide David, O. and Oke, A.E., 2024. Fuzzy synthetic evaluation of the critical drivers of UAVs' deployment for construction in Nigeria. *International Journal of Intelligent Unmanned Systems*. <https://doi.org/10.1108/IJIUS-01-2024-0020>
46. Aliu, J., Oke, A.E., Austin Odia, O., Akanni, P.O., Leo-Olagbaye, F. and Aigbavboa, C., 2024, "Exploring the barriers to the adoption of environmental economic practices in the construction industry", *Management of Environmental Quality*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/MEQ-01-2024-0053>
47. Jamir Singh, P.S., Oke, A.E., Aliu, J., Isaiah Kayode, T., Azura Ramli, R., Haizzan Yahaya, M. and Idris, A., 2024, "A study on substance abuse awareness and usage trends within the construction sector", *Construction Innovation*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/CI-03-2024-0064>
48. Oke, A.E., Aliu, J., Farhana, M.Z., Jesudaju, O.T. and Lee, H.-P., 2024, "A capability assessment model for implementing digital technologies in Nigerian heavy construction firms", *Smart and Sustainable Built Environment*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/SASBE-04-2024-0112>
49. Kineber, A.F., Elshaboury, N., Oke, A.E., Aliu, J., Abunada, Z. and Alhusban, M., 2024. Revolutionizing Construction: A Cutting-Edge Decision-Making Model for Artificial Intelligence Implementation in Sustainable Building Projects. *Heliyon*. Volume 10, Issue 17, e37078:
<https://doi.org/10.1016/j.heliyon.2024.e37078>
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63. Aghimien, D., **Aliu, J.**, Chan, D.W., Aigbavboa, C. and Awuzie, B., 2024. Making a case for nature-based solutions for a sustainable built environment in Africa. *Sustainable Development*. <https://doi.org/10.1002/sd.2935>
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87. Oke, A.E., **Aliu, J.**, Jamir Singh, P.S., Onajite, S.A., Shaharudin Samsurijan, M. and Azura Ramli, R., 2023. Appraisal of awareness and usage of digital technologies for sustainable well-being among construction workers in a developing economy. *International Journal of Construction Management*, pp.1-9. <https://doi.org/10.1080/15623599.2023.2179628>
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89. Oke, A.E., **Aliu, J.**, Tunji-Olayeni, P. and Abayomi, T., 2023. Application of gamification for sustainable construction: an evaluation of the challenges. *Construction Innovation*, (ahead-of-print). <https://doi.org/10.1108/CI-09-2022-0247>
90. Osunsanmi, T.O., Olawumi, T.O., Smith, A., Jaradat, S., Aigbavboa, C., **Aliu, J.**, Oke, A., Ajayi, O. and Oyeyipo, O., 2023. Modelling the drivers of data science techniques for real estate professionals in the fourth industrial revolution era. *Property Management*, (ahead-of-print). <https://doi.org/10.1108/PM-05-2022-0034>
91. **Aliu, J.**, Aghimien, D., Aigbavboa, C., Ebekozién, A., Oke, A.E., Adekunle, S.A., Akinradewo, O. and Akinshipe, O., 2022. Developing emotionally competent engineers for the ever-changing built environment. *Engineering, Construction and Architectural Management*, (ahead-of-print). <https://doi.org/10.1108/ECAM-08-2022-0806>
92. **Aliu, J.**, Aghimien, D., Aigbavboa, C., Oke, A., Ebekozién, A. and Temidayo, O., 2022. Empirical Investigation of Discipline-Specific Skills Required for the Employability of Built Environment Graduates. *International Journal of Construction Education and Research*, pp.1-20. <https://doi.org/10.1080/15578771.2022.2159589>
93. Oke, A.E., **Aliu, J.**, Onajite, S. and Simeon, M., 2022. Success factors of digital technologies (DT) tools adoption for sustainable construction in a developing economy. *Construction Innovation*, (ahead-of-print). <https://doi.org/10.1108/CI-08-2022-0207>
94. Ebekozién, A., Aigbavboa, C.O., **Aliu, J.**, 2022. Built environment academics for 21st-century world of teaching: stakeholders' perspective, *International Journal of Building Pathology and Adaptation* (ahead-of-print). <https://doi.org/10.1108/IJBPA-04-2022-0062>
95. Aghimien, D., Ikuabe, M., **Aliu, J.**, Aigbavboa, C., Oke, A.E. and Edwards, D.J., 2022. Empirical scrutiny of the behavioural intention of construction organisations to use unmanned aerial vehicles. *Construction Innovation*, (ahead-of-print). <https://doi.org/10.1108/CI-04-2022-0088>
96. Aghimien, D., Aigbavboa, C., Oke, A.E. and **Aliu, J.**, 2022, "Delineating the people-related features required for construction digitalization", *Construction Innovation*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/CI-01-2022-0012>

97. Ebekozi, A., Aigbavboa, C.O., **Aliu, J.** and Thwala, W.D., 2022. Generic skills of future built environment practitioners in South Africa: unexplored mechanism via students' perception. *Journal of Engineering, Design and Technology*. <https://doi.org/10.1108/JEDT-10-2021-0571>
98. **Aliu, J.** and Aigbavboa, C.O., 2021. Key Generic Skills for Employability of Built Environment Graduates. *International Journal of Construction Management Print ISSN: 1562-3599 Online ISSN: 2331-2327*. <https://doi.org/10.1080/15623599.2021.1894633>
99. **Aliu, J.** and Aigbavboa, C., 2021. Reviewing the trends of construction education research in the last decade: a bibliometric analysis. *International Journal of Construction Management*, pp.1-10. <https://doi.org/10.1080/15623599.2021.1985777>
100. **Aliu, J.** and Aigbavboa, C.O., 2021. Reviewing the roles of extracurricular activities in developing employability skills: A bibliometric review. *International Journal of Construction Management Print ISSN: 1562-3599 Online ISSN: 2331-2327*. <https://doi.org/10.1080/15623599.2021.1995807>
101. **Aliu, J.** Clinton, A. and Thwala, W.D., 2021. Driving the Fourth Industrial Revolution Initiative through University and Industry Collaborations. *Journal of Construction in Developing Countries*, 26(2), pp.211-230. http://web.usm.my/jcdc/vol26_2_2021/jcdc2021.26.2.10.pdf
102. **Aliu, J.** and Aigbavboa, C.O., 2020. Structural determinants of graduate employability: Impact of university and industry collaborations. *Journal of Engineering Design and Technology*: ISSN: 1726-0531. DOI: <https://doi.org/10.1108/JEDT-05-2020-0189>.
103. Arowoia, V.A., Oke, A.E., Aigbavboa, C.O. and **Aliu, J.**, 2020. An appraisal of the adoption of Internet of Things (IoT) elements for sustainable construction. *Journal of Engineering, Design and Technology*. ISSN: 1726-0531. <https://doi.org/10.1108/JEDT-10-2019-0270>.
104. **Aliu, J.** and Aigbavboa, C.O., 2019. Employers' perception of employability skills among built environment graduates. *Journal of Engineering, Design and Technology*. ISSN: 1726-0531. <https://doi.org/10.1108/JEDT-06-2019-0162>.
105. **Aliu, J.** and Aigbavboa, C.O., 2019. *Journal of Physics: Conference Series*, Volume 1378, Part 1 Examining the Roles of Human Capital Theory. What next for the Construction Industry? <https://doi.org/10.1088/1742-6596/1378/2/022057>.

Selected Conference Papers (Peer-Reviewed)

1. Aigbe, F., Aigbavboa, C., **Aliu, J.** and Amusan, L., Construction 5.0: A Future Gig Workforce Resourcing Guide in the Technological Era. https://www.researchgate.net/profile/Fortune-Aigbe-2/publication/396521535_ASOCSA2025-40_CONSTRUCTION_50_A_Future_Gig_Workforce_Resourcing_Guide_in_the_Technological_Era/links/68f09f9effdca73694b83eba/ASOCSA2025-40-CONSTRUCTION-50-A-Future-Gig-Workforce-Resourcing-Guide-in-the-Technological-Era.pdf
2. **Aliu, J.O.**, Dunmoye, I.D., Fakiyesi, V.O. and Feyijimi, T.R., 2025, June. Trends in Modular Construction Research: A Bibliometric Examination of Developed and Developing Regions. In *2025 ASEE Annual Conference & Exposition*. <https://doi.org/10.18260/1-2--57721>
3. Adekunle, S.A., Aigbavboa, C., Ejohwomu, O., **Aliu, J.** and Thwala, W.D., 2022. Leaders of Tomorrow: Status and Outlook of BIM Implementation Among Young Quantity Surveyors. *Proceedings of International Structural Engineering and Construction*. https://www.research.manchester.ac.uk/portal/files/220377083/Ejohwomu_AAE_15.pdf
4. Akinshipe, O., **Aliu, J.** and Aigbavboa, C., 2022. The Futuristic Building Industry: Updating Skills-Set Required for Digital Transformation. *Social and Occupational Ergonomics*, 65, p.38.
5. **Aliu, J.** and Aigbavboa, C.O., 2019. Role of industry employers in fostering employability skills: a literature review. *The 10th International Structural Engineering and Construction Conference* (Chicago). ISBN 978-1-5323-5952-1.
6. **Aliu, J.** and Aigbavboa, C.O., 2018. Equipping graduates for the future: The need for higher institutions to collaborate. *Third North American IEOM Conference* (Washington D.C). (ISSN: 2169-8767). <http://ieomsociety.org/dc2018/proceedings/> (Best track paper).
7. **Aliu, J.** and Aigbavboa, C.O., 2018. Work experience for construction graduates: An industry perspective. *Third North American IEOM Conference* (Washington D.C). (ISSN: 2169-8767). <http://ieomsociety.org/dc2018/proceedings/>
8. M, Mbala, C, Aigbavboa, **Aliu J.**; 2018. Reviewing the Negative Impacts of Building Construction Activities on the Environment: The Case of Congo. 9th International Conference on Applied Human Factors and Ergonomics. https://link.springer.com/chapter/10.1007/978-3-319-94199-8_11

9. M, Mbala, C, Aigbavboa, **Aliu J**; 2018. Causes of Delay in Various Construction Projects: A Literature Review. 9th International Conference on Applied Human Factors and Ergonomics.
https://link.springer.com/chapter/10.1007/978-3-319-94199-8_47

Fellowship and Grants

- **Co-Principal Investigator (Co-PI)**, 2025 – 2028. Collaborative Research: BCSEER (**\$725,796**): “*The ProQual Institute for Interpretive Research Methods in STEM Education: Sustaining Impact and Building on Success*”, NSF Grant Number: 2526932 (**Approved**)
- **Co-Principal Investigator (Co-PI)**, 2024 – 2025. National Science Foundation (NSF) Special Call for Health Outcomes and Climate-Related Disaster Research – **\$49,620 (Completed)**
- **Co-Principal Investigator (Co-PI)** (2023 – 2024) – “*Developing an Inclusive Approach to Emergency Management Workforce Training and Development*” – Federal Emergency Management Agency (FEMA) Award, **\$10,000**; EMW-2023-MP-HE-0007 (**Completed**)
- **Co-Principal Investigator (Co-PI)**, 2024, The Institute for Homeland Security, Sam Houston State University, “*A Systematic Review of Challenges in Applying Immersive Technologies for Critical Infrastructure Emergency Response*” (Report No. IHS/CR-2024-1029), **\$5,000 (Completed)**
- **Co-Principal Investigator (Co-PI)**, 2025, The Institute for Homeland Security, Sam Houston State University, “*Assessing Workforce Training Strategies in Critical Infrastructure: Insights and Recommendations*” (Report No. IHS-2025-1000), **\$5,000 (Completed)**
- **Principal Investigator (Co-PI)**, 2025, The Institute for Homeland Security, Sam Houston State University, “*Generative AI for Advanced Security Frameworks in Transportation Networks*” (Security Report No. 2025-1012), **\$5,000 (Completed)**
- **Co-Principal Investigator (Co-PI)**, 2025 – 2028, IUSE/EDU (\$749,497) – “*LITE-FLC: Leveraging Emerging Instructional Technologies and Pedagogies of Active Learning for Engineering Education Through Faculty Learning Communities*”: NSF Grant Number: 2539857 (**Submitted**)
- **Co-Principal Investigator (Co-PI)**, 2025 – 2028. International Research Experiences for Students (IRES) (**\$436,477**), “*Applied Biomedical Research on the Science of Aging*”, NSF Grant Number: 217685 (**Submitted**)

Significant Honors and Awards

- Top 10 publishers with Emerald Publishing from the Middle East and Africa in 2024.
- Best Reviewer Recognition for International Journal of Construction Management throughout the year 2022
- Best Reviewer Recognition for International Journal of Construction Management throughout the year 2021
- Global Excellence Stature Fellowship (GES) in support of three years of Doctoral Research (2018-2020) at the Department of Civil Engineering, University of Johannesburg, South Africa (R150,000.00 per year)
- Merit Bursary Award following outstanding Master research result (2018 – 2020)
- Best Track Paper Award (3rd North American IEOM Conference, 2018, Washington D.C)
- Golden Key International Honour following outstanding Master research result in 2018.

Teaching Overview

A- Courses Taught

- Project Management (University of Johannesburg) (2021 – 2022)
- Research Methodology (University of Johannesburg) (2019 – 2022)
- Principles of Sustainability (University of Johannesburg) (2021 – 2022)
- Water Reticulation Design (University of Johannesburg) (2021 – 2022)
- Construction Project Management (Federal University of Technology, Minna) (2013 – 2016)
- Management of Civil Engineering Works II (Federal University of Technology, Minna) (2013 – 2016)

B- Teaching Activities not included in courses listed above:

- Co-developing and delivering curriculum modules on nature-based solutions and natural infrastructure (Overview of Natural Infrastructure and Engineering Design of Natural Infrastructure) (2022 – 2024)
- Developing an educational activity book (for kids and professionals) on nature-based solutions and natural infrastructure (2022 – 2024)

- Developed two (2) graduate courses in Research Methodology on Research Design and Proposal Writing and Research Ethics (2019 – 2022)
- Taught over 200 engineering students online on partial least squares structural equation modeling (PLS-SEM) for analyzing data (2020 – 2022).
- Advised(ing) two PhD students, eight Masters students and thirty-three Bachelors students (2020 – Present) on varying research projects across various whose research interests cut across different built environment themes such as project management, housing, employability, risk management, construction education, construction ergonomics and sustainability (2019 – Present) (University of Johannesburg)
- Organized and took students on-site visits to help develop an understanding and knowledge of engineering and the applicable course content. These site visits included:
 - Construction of Examination Testing Centre (Federal University of Technology, Minna), Phase 1, Phase 2, Phase 3 (seven visits)
 - West African Science Service Centre on Climate Change and Adopted Land Use (WASCAL) building (Federal University of Technology, Minna) (five visits)

Professional Memberships

Project Management South Africa, #55081725, 2018 – Present

South African Institution of Civil Engineering #201800262, 2018 – Present

International Society of Energy and Built Environment # ISEBE-A-0405, 2024 – 2027

Workshops and Professional Development Activities

- Participated in the National Academies of Sciences, Engineering, and Medicine workshop on Benefits, Applications and Opportunities of Natural Infrastructure held on May 10-11 at the University of Georgia (UGA) Conference Center, 1197 South Lumpkin Street, Athens, GA 30602.
- Participated in the 11th Construction Industry Development Board (cidb) postgraduate research conference with the theme “Positioning the construction industry in the fourth industrial revolution” held at the School of Tourism and Hospitality, University of Johannesburg, South Africa, from 28th to 30 of July 2019.
- Participated as a member of the organizing Committee of the 5th International Conference on Infrastructure Development in Africa (ICIDA) with the theme “Infrastructure as a Driver for Economic Growth and Integration in Africa: What is the way forward?” held at the Department Of Construction Management and Quantity Surveying, University of Johannesburg, Johannesburg, South Africa, from 10th to 13th July 2016.

Review of Academic and Professional Journals:

- Journal of Cleaner Production, USA (2020 – Present)
- Engineering, Construction and Architectural Management, Emerald Publishing (2019 – Present)
- Sustainable Development Journal (2019 – Present)
- Frontiers in Built Environment (2019 – Present)
- International Journal of Sustainability in Higher Education (2019 – Present)
- Construction Economics and Building, UTS ePress (2019 – Present)
- African Journal of Science, Technology, Innovation and Development (2019 – Present)
- Journal of Construction in Developing Countries, Penerbit USM (2019 – Present)
- Journal of Engineering, Design and Technology, Emerald Publishing (2018 – Present)
- Journal of Construction Project Management and Innovation, University of Johannesburg (2018 – Present)
- International Journal of Construction Management (2018 – Present)
- Journal of Construction Engineering and Management (2022 – Present)
- Cogent Economics and Finance (2023 – Present)
- Built Environment Project and Asset Management (2023 – Present)

Public Service:

- Judge: Georgia Science & Engineering Fair (GSEF) – March 2023

- Co-facilitator: Research Experiences for STEM Educators and Teachers (RESET) – May 2022 (Summer)

Postgraduate Thesis Supervision/Co-Supervision

Masters

- Menzezi Mhlungu (2021) - Integration of Mobile Technology into the Construction Management Higher Education Curriculum in South Africa: A Case Study. Masters, the University of Johannesburg (**Completed, 2025**).
- Monty Mamoswa (2021) – Communication Management For Project Delivery In South African Construction Industry In The Era Of The Fourth Industrial Revolution. Masters, the University of Johannesburg (**Completed, 2024**).
- Thikho Deon Manyaka (2022) - Assessment of Risk Management Practices in the South African Construction Industry. Masters, the University of Johannesburg (**Completed, 2022**).
- Raesah Essop (2021) - An assessment of virtual reality to enhance performance in the South African construction industry. Masters, the University of Johannesburg (**Completed, 2021**).
- Lwandile Siphelele Tukwayo (2021) - A comparative study of soft skills amongst engineering graduates with industry expectations in South Africa. Masters, the University of Johannesburg (*Ongoing*).
- Msizi Malusi Innocent Zungu (2021) - An assessment of the effects of neglecting project management processes by prioritizing water supply for end users before the finalization of source developments and bulk infrastructure in rural communities. Masters, the University of Johannesburg (*Ongoing*).
- Xitshembiso Hartley Nhlanguwini (2021) - Application of Construction Safety In Risk Management Systems on Construction Projects. Masters, the University of Johannesburg (*Ongoing*).
- Tlou Caroline Kgomo (2023) - Assessing the Integration of Nature-Based Solutions in Construction Projects within the South African Context. Masters, the University of Johannesburg (*Ongoing*).

PhD

- Fortune Aigbe (2023) - A Framework for Managing the Future Construction Workforce in the South African Construction Industry. PhD, the University of Johannesburg (*Ongoing*).
- John Aiyesehinde (2023) - A Smart Cluster Framework for the Informal Automotive Aftermarket Sector: A Case Study of South Africa. PhD, the University of Johannesburg (*Ongoing*).

Professional Work Experience

- **Civil Engineer**
Physical Planning and Developing Unit, Federal University of Technology, Minna (2013 – 2016)
 - Conducted site inspections and surveys to gather information about the project site.
 - Prepared design drawings and specifications using computer-aided design (CAD) software.
 - Assisted senior engineers with project planning, budgeting, and scheduling.
 - Collaborated with other professionals, such as architects, contractors and environmental engineers.
 - Assisted in the preparation of project proposals and bidding documents.
 - Conducted material and equipment research to ensure compliance with project requirements.
 - Assisted in the review and approval of shop drawings, product data, and other submittals.
 - Provided technical support during construction, including field visits to ensure compliance with plans.
 - Maintained accurate project documentation and records.
 - Performed other duties as assigned by senior engineers or project managers.
- **Civil Engineer**
Ministry of Works and Housing, Minna, Niger State (2011-2013)
 - Performed regular site visits, inspections and surveys.
 - Oversaw construction works being completed on site.

John Aliu PhD

- Worked towards strict deadlines, often under continuous pressure.
- **Intern Civil Engineer**
Physical Planning Unit, Nnamdi Azikiwe University (2009)
 - Performed regular site visits, inspections, audits and surveys.
 - Regularly checked the progress of works according to the schedule.
 - Oversaw construction works being completed on site.
 - Worked towards strict deadlines, often under pressure.
 - Presented design to clients, senior engineers and project managers.

References

Available upon request