



## Engr. Dr. Lasisi Salami LAWAL

BEng (Futmx), MSc (Sussex), MEng (UNN), PhD (Sussex), PGD (Futmx), MBA (UNN), MIET, SMIEEE, FNSE, FNIEEE, FNISEng, MNIM, SMAIAA, MPMI, MSSPI.

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## BIO

Dr Lasisi Salami Lawal is a Visiting Associate Professor in the Department of Information and Communication Engineering Department, Faculty of Engineering and Environmental Design, Usmanu Danfodiyo University, Sokoto, Vice-Chair, International Telecommunication Union Radiocommunication (ITU-R) Satellite Study Group (SG-4), 2023-2027 and Satellite Expert in Satellite Operations & Applications with more than 25 years cognitive experience in System design, solutions and applications.

He is Board Member & Chair, Aerospace & Aviation Sector, Engineering Regulation Monitoring and Enforcement on behalf of the Council of the Regulation of Engineering in Nigeria (COREN), Chartered Engineer (CEng), Editorial Board Member of American Journal of Engineering and Technology Management and International Advisory Board Member for I4CT, Academic Advisory Board Member of The International Education Management Agency (IEMA), UK, Panel Member, The IET (Institution of Engineering and Technology) Achievement Medals Panel, Editorial Board of the Nigerian Engineer Magazine of Nigerian Society of Engineers, Magazine, 2023-2025 Technical Transactions Board Member of the Nigerian Institute of Electrical and Electronic Engineers (NIEEE), Global Climate Justice Fellow among others.

He has more than 18 consecutive years of proven work in the field of satellite operations, satellite service delivery for digital development and transformation for unserved and underserved communities including being part of Senior Management Team, Satellite Project Engineering Management, Policy Formulation, Regulations, working knowledge and skills in the Telecommunications Industry Sector and Value Chains including Experience in Applying Design and Application for realization of United Nations Sustainable Development Goals in Africa.

He is a proud winner of 2023 Institution of Engineering Technology (IET) Global Impact-in-Society Award in assisted living & robotics category leveraging Communications Satellite Systems, Software Application, Cyber security, Telemedicine, Health Technology, Informatics and Green Energy to fast-track United Nations Sustainable Development Goals (<https://www.bawa.tech/blog/iet-impact-in-society-winners>).

He brings his professional and multidisciplinary knowledge to bear in fostering a nexus between academia and industry to strengthen going concerns of emerging and innovative technologies covering Space Science & Technologies, Satellite Applications & Satellite Service Deliveries, GNSS & SBAS Technologies, Space Education & Technologies, Satellite Project Management, Space Sustainability, Pilot and Field Project Trials.

He has hands-on experience on two communications satellites launched for Nigeria (NIGCOMSAT-1 and NIGCOMSAT-1R) as a project team leader meant to connect the unconnected in unserved and underserved communities of Africa and promote digital transformation & Development, knowledge economy, digital health inclusion, working knowledge and skills in the Satellite and Telecommunications Industry Sector and Value Chains including Experience in Applying Design and Application.

View my Google Scholar Publication profile - citations hyperlink: <https://scholar.google.com/citations?user=Dcgy9x0AAAAJ&hl=en>

View my Academia hyperlink: <https://udus.academia.edu/LasisiLawal>

View my Scholarprofiles hyperlink: <https://scholarprofiles.com/0000-1062-2327>

Follow my ResearchGate hyperlink: [https://www.researchgate.net/profile/Lasisi-Lawal?ev=hdr\\_xprf](https://www.researchgate.net/profile/Lasisi-Lawal?ev=hdr_xprf)

From this research gate link, you can download many of my papers.

## DEGREES/PROFESSIONAL QUALIFICATIONS

- PhD in Engineering  
University of Sussex, United Kingdom 27 April 2011 - 29 Oct 2014
- MSc (Distinction) – Satellite Communications and Space Systems  
University of Sussex, United Kingdom 05 Oct 2009 – 15 Oct 2010
- MEng in Electronic (Communication) Engineering  
University of Nigeria, Enugu, Nigeria July, 2016
- MBA in Business Management  
University of Nigeria, Enugu, Nigeria. Feb 2020-May, 2024.
- Leadership Development Course Certificate  
African Centre Leadership, Strategy & Development School, Abuja, Sep, 2024- 6 Sep, 2025.
- 16-Months Practical Hands-on and Know-How Transfer Training (KHTT) on NIGCOMSAT-1 Spacecraft with **Certificate of Satellite Professional** in Satellite Engineering and Space Systems  
Shenzhou Institute, China Academy of Space Technology, Beijing Oct 2005-Jan 2007
- Post Graduate Diploma (PGD) in Business Management Technology  
Federal University of Technology, Minna, Nigeria April 2004- April 2006
- BEng Electrical and Computer Engineering  
Federal University of Technology, Minna, Nigeria June 1993 -1999

## RECENT RESEARCH CONCENTRATED ON THREE INTERLINKED THEMES:

1) Assets Monitoring and Tracking, Surveillance & Security Systems Leveraging SATNAV Systems (GNSS and SBAS)

2) Communications & Space Technologies , Autonomous Systems and General Applications including applications for Aviation and Non-Aviation sector such as Maritime, Transport, Precision Agriculture, Disaster Monitoring etc

3) Digital Engineering and use of Artificial Intelligence (AI) for NewSpace 2.0, autonomous operations in Space Systems Engineering, Health Systems, Industrial Automation including Ethical Considerations and Geo-regional Influence in the use of AI to address Global Inequality and AI Colonialism.

**A RECENT PROJECT:** Tele-medicine as a panacea to medical tourism in Africa exploiting communication satellite technologies.

The project has been awarded The Institution of Engineering and Technology 2023 Impact in Society Award for Healthy Lives. This recognition is a result of its successful telemedicine project, which addressed issues of low literacy and language barriers in remote health care delivery. The project involved a multidisciplinary team comprising of Principal Investigator (PI) from NIGCOMSAT Ltd now a faculty member of UDUSOK, Nigeria; together with collaborators from various organizations, including the University of Sussex, Yale University School of Medicine, and the Federal University of Technology, Minna. The project leveraged the NIGCOMSAT-1R satellite to provide digital health inclusion, resulting in a viable advanced technological solution for telemedicine implementation. Some research project stories and reports on 'Build back better with broadband: Research stories from the front line' among others:

- <https://www.itu.int/pub/D-TND-08-2022> (page 8 to 11).
- <https://www.itu.int/en/ITU-D/Pages/connect2recover/research-competition/winners/default.aspx>
- <https://techafricanews.com/2022/12/02/itu-c2r-winners-present-ways-to-help-digital-inclusion-amid-covid-recovery/>
- <https://www.itu.int/itu-d/sites/connect2recover/research-reports/>

### PUBLISHED ARTICLES ON TELEMEDICINE

1. "A review of telemedicine and its potential in developing countries," 8th International Conference on Mechatronics Engineering (ICOM 2022), Online Conference, Kuala Lumpur, Malaysia, 2022, pp.32-40, doi: 10.1049/icp.2022.2261. <https://ieeexplore.ieee.org/abstract/document/9964174>
2. "Overview of Satellite Communications and its Applications in Telemedicine for the underserved in Nigeria: A case study," 2022 International Conference on Electrical, Computer, Communications

- and Mechatronics Engineering (ICECCME), Maldives, Maldives, 2022, pp. 1-10, doi: 10.1109/ICECCME55909.2022.9988286. <https://ieeexplore.ieee.org/document/9988286>
3. "Internally Displaced Persons (IDPs) in Nigeria: An Overview of Health Situation published by International Journal of Health, Safety and Environment (IJHSE). <https://www.researchgate.net/publication/366055703> Internally Displaced Persons in Abuja An Overview Of Health Situation and Solution.
4. "Digital Health Inclusion: A Pilot Study of Health Services Deployment Using Communications Satellite for the Underserved in Nigeria". British Journal of Healthcare and Medical Research (BJHMR). DOI:<https://doi.org/10.14738/bjhmr.103.2023>. Published: 2023-05-09. <https://journals.scholarpublishing.org/index.php/JBEMi/article/view/14715>

### **THE IET AWARD**

The project won the Institution of Engineering and Technology's 2023 Impact-in-Society Award for Healthy Lives, assisted living & robotics category in March 2023.

<https://www.bawa.tech/blog/iet-impact-in-society-winners>.

### **ONGOING RESEARCH STEMMING FROM BARRIERS ENCOUNTERED IN FIELD TRIALS AND PILOTS TO FAST-TRACK TELEMEDICINE DRIVE AND ADOPTION IN RURAL AFRICA SECTIONED INTO 2 BROAD DIMENSIONS:**

- i. ADVANCING TELEMEDICINE ADOPTION IN RURAL AFRICA THROUGH DEEP LEARNING-BASED MULTILINGUAL TRANSLATION USING LARGE LANGUAGE MODELS (LLMs).
- ii. ETHICAL, POLICY AND SECURITY CONSIDERATIONS IN THE USE OF ARTIFICIAL INTELLIGENCE (AI) FOR DIGITAL HEALTH SYSTEMS AS WELL AS FOCUS ON GEO-REGIONAL INFLUENCE TO ADDRESS GLOBAL INEQUALITY AND AI COLONIALISM.

# SAMPLE/SELECTED PUBLICATIONS

## A. BOOK CHAPTER CONTRIBUTIONS

1. Lawal, L.S., & Chatwin, C.R. Recent Study on the Criticality of Space Based Oscillators for the Optimal Performance of Time-Based Signals  
Advanced Aspects of Engineering Research Vol. 16, 28 June 2021, Page 186-212  
Book Publisher: India: B P International, Guest House Road, Street no - 1/6, Hooghly, West Bengal, India, Corp. Firm Registration Number: L77527, Tele: +91 7439016438 UK: B P International, 27 Old Gloucester Street London WC1N 3AX, UK, Fax: +44 20-3031-1429EMP-014-SS. Retrieved from: <https://doi.org/10.9734/bpi/aaer/v16/1726C>
2. Future Wireless Networks and Information Systems  
Lawal, L.S., & Chatwin, C.R. (2012). The Future of Wireless Communications in Africa. Future Wireless Networks and Information Systems, Lecture Notes in Electrical Engineering, Springer Link, 143, 243 -251. doi: 10.1007/978 -3 -642 -27323 -0\_31. Retrieved from: [https://link.springer.com/chapter/10.1007/978-3-642-27323-0\\_31](https://link.springer.com/chapter/10.1007/978-3-642-27323-0_31)
3. Recent Developments in Engineering Research Vol. 11 (Book Publisher: International, Third Floor, 207 Regent Street, London, W1B 3HH, UK, Fax: +44 20-3031-1429). Retrieved from: <https://stm.bookpi.org/RDER-V11/issue/view/26>  
Chapter Four: A Study of a Low-Cost Navigation Augmentation System: The United Kingdom's Immediate Answer to the Galileo Brexit Conundrum. Retrieved from: <https://doi.org/10.9734/bpi/rder/v11/6732D>
4. Chapter Five: An Overview of Global Navigation Satellite and Augmentation Systems. Retrieved from: <https://doi.org/10.9734/bpi/rder/v11/6733D>
5. Chapter Six: Nigcomsat-1R Satellite-Based Augmentation System (SBAS) Test Bed Trial: A Scientific Explanation. Retrieved from: <https://doi.org/10.9734/bpi/rder/v11/734D>

## B. JOURNALS AND CONFERENCE PROCEEDINGS

1. Ahmed, M.S., & Lawal, L.S. (2007). A Digital Electronic Ballot Counter Box. AUJOURNAL of TECHNOLOGY, Thailand 10(3), 181--188. Retrieved from: <http://www.assumptionjournal.au.edu/index.php/au>
2. Lawal, L.S., & Chatwin, C.R. (2010). Optimized and Advanced Multi--Mission Communication Satellite System: A Panecea for a Systemic Paradigm Shift towards Small Standardized and Advanced Multi--Purpose Geostationary Spacecraft for an active Global Communication Infrastructure to Promote Digital Inclusion In The Global Village. Proceedings of 28th AIAA International Communications Satellite Systems Conference and Exposition, California,USA. doi: 10.2814/6.2010--8887. Retrieved from: <https://arc.aiaa.org/doi/10.2514/6.2010-8887>

3. Lawal, L.S., & Chatwin, C.R. (2010). Safety and Disaster Preparedness for Strategic Global Infrastructure: Communication Satellite Systems. Proceedings of 8th IET International System Safety Conference, Manchester, UK. doi:10.1049/cp.2010.0810. Retrieved from: <https://ieeexplore.ieee.org/document/5712314>
4. Lawal, L.S., & Chatwin, C.R. (2011). Essential Parameters of Space--Borne Oscillators That Ensures Performance of Satellite--Based Augmentation System. Proceedings of 3rd IEEE International Conference on Science and Technology, ICAST, (pp42--50). Abuja--Nigeria. doi: 10.1109/ICASTech.2011.6145156. Retrieved from: <https://ieeexplore.ieee.org/document/6145156>
5. Lawal, L.S., & Chatwin, C.R. (2011). Optimization of Mass Volume ratio of Spacecraft Structure for Advanced and High Powered Communication Satellites, Proceedings of 10th International Information and Telecommunication Technologies conference, Florianopolis, Santa Catarina Island, Brazil. Retrieved from: [https://www.academia.edu/7796163/Optimization\\_of\\_Mass\\_Volume\\_Ratio\\_of\\_Spacecraft\\_Structure\\_f\\_or\\_Advanced\\_and\\_High\\_Powered\\_Communication\\_Satellites](https://www.academia.edu/7796163/Optimization_of_Mass_Volume_Ratio_of_Spacecraft_Structure_f_or_Advanced_and_High_Powered_Communication_Satellites)
6. Lawal, L.S., & Chatwin, C.R. (2012). The Future of Wireless Communications in Africa. International Conference on Wireless Network and Information System. Future Wireless Networks and Information Systems, Lecture Notes in Electrical Engineering, Springer Link, 143, 243--251. doi: 10.1007/978--3--642--27323--0\_31. Retrieved from: [https://link.springer.com/chapter/10.1007/978-3-642-27323-0\\_31](https://link.springer.com/chapter/10.1007/978-3-642-27323-0_31)
7. Lawal, L.S., & Chatwin, C.R. (2012). Advanced High Power Subsystem for Geostationary Satellites. IEEE Computer Society, The Association of Computing Machinery Digital Library. 4, 138--142. ISBN: 978--0--7695--4703--9. Retrieved from: <https://dl.acm.org/doi/10.5555/2452574.2454347>
8. Lawal, L.S., & Chatwin, C.R. (2012). Antenna System Layout in High Capacity Geostationary Communication Satellites. Topical Conference Antennas and Propagation in Wireless Communications, IEEE APWC 2012, (pp1012--1015), Capetown, South Africa. doi: 10.1109/APWC.2012.6324983. Retrieved from: <https://ieeexplore.ieee.org/document/6324983>
9. Lawal, L.S., Ahmed--Rufai, T., Chatwin, C.R., & Young, R.C.D. (2013). Delivery of Broadband Services to Sub--Saharan Africa via Nigerian Communications Satellite. International Journal of Information and Computer Science (IJICS). 2(5), 77--88. Retrieved from: [https://www.academia.edu/7732685/Delivery\\_of\\_Broadband\\_Services\\_to\\_Sub-Saharan\\_Africa\\_via\\_Nigerian\\_Communications\\_Satellite\\_Introduction\\_What\\_is\\_Broadband](https://www.academia.edu/7732685/Delivery_of_Broadband_Services_to_Sub-Saharan_Africa_via_Nigerian_Communications_Satellite_Introduction_What_is_Broadband)
10. Lawal, L.S., & Chatwin, C.R. (2013). Nigerian Communication Satellite (NIGCOMSAT--1R) Ka--band System", 19th Ka and Broadband Communications, Navigation and Earth Observation Conference and 31st AIAA International Communications Satellite Systems Conference (ICSSC), Florence--Italy. Retrieved from <http://www.kaconf.com/#>  
[https://www.academia.edu/7732693/NIGERIAN\\_COMMUNICATION\\_SATELLITE\\_NIGCOMSAT-1R\\_KA-BAND\\_SYSTEM](https://www.academia.edu/7732693/NIGERIAN_COMMUNICATION_SATELLITE_NIGCOMSAT-1R_KA-BAND_SYSTEM)
11. Lawal, L.S., Ahmed--Rufai, T., Chatwin, C.R., & Liu, R. (2013). The role of Communication Satellites in Public Management, Education, Governance and Business in Nigeria. International

Conference on Electronics Engineering, Advanced Communication, and Information Technology, EEACIT, Kuala Lumpur, Malaysia. Human Resource Management Research Journal, 3(5),178--187. doi: 10.5923/j.hrmr.20130305.02. Retrieved from <http://article.sapub.org/10.5923.j.hrmr.20130305.02.html>

12. Lawal, L.S. (2014). Economically Sustainable Public Security and Emergency Network Exploiting a Broadband Communications Satellite (Doctoral Thesis, University of Sussex, United Kingdom). Available from [http://sro.sussex.ac.uk/50603/1/Salami\\_Lawal\\_Lasisi.pdf](http://sro.sussex.ac.uk/50603/1/Salami_Lawal_Lasisi.pdf).

13. Lawal, L.S & Chatwin, C.R. (2015). Enhancing Public Safety and Security of Critical National Infrastructure Utilising The Nigerian Satellite Augmentation System (NSAS) for 2015 National Engineering Conference and Annual General Meeting of Nigerian Society of Engineers (NSE) held at Akure, Ondo State on 16-20 November, 2015. Retrieved from: 16-20 November, 2015. Retrieved from: <https://www.nse.org.ng/news-events/past-conferences>; <http://sro.sussex.ac.uk/id/eprint/58774/>

14. Lawal, L.S & Chatwin, C.R. (2017). Criticality of Space Based Oscillators for the Optimal Performance of Time-Based Signals, Asian Journal of Physics. pp. 1-30. ISSN 0971-3093. Retrieved from <http://sro.sussex.ac.uk/id/eprint/69223/>

15. Lawal, L.S, Chatwin, C.R & Rummy, H (2017). The Communications Satellite Industry as an Element in Nigeria's Attempt to Modernise its Economy and Society, International Journal of African and Asian Studies (JAAS), Vol.51, 30-39. Retrieved from <https://iiste.org/Journals/index.php/JAAS/article/view/45553>

16. Lawal, L.S & Chatwin, C.R. (2019). Design of A Low-Cost Augmentation Navigation System: The United Kingdom's Immediate Answer To The Galileo Brexit Conundrum, Journal of Electrical and Electronics Engineering ISSN:2456-6055.Vol. 5 (1),1-25 2019. Retrieved from <https://ijrdo.org/index.php/eee/article/view/2625/2192>

17. Lawal, L.S & Chatwin, C.R. (2019a). A Review of Global Navigation Satellite and Augmentation Systems, Journal of Electrical and Electronics Engineering ISSN:2456-6055.Vol. 5 (3),1-21 2019. Retrieved from <https://ijrdo.org/index.php/eee/article/view/2731/2251>

18. Lawal, L.S, Li, D & Chatwin, C.R. (2020). NIGCOMSAT-1R SATELLITE-BASED AUGMENTATION SYSTEM(SBAS) TEST BED TRIAL Journal of Electrical and Electronics Engineering ISSN:2456-6055.Vol. 6 (5),1-9 2020. Retrieved from <https://ijrdo.org/index.php/eee/article/view/3651>.

19. Lawal, L.S., (2021). SATELLITE BASED AUGMENTATION SYSTEM (SBAS) FOR PRECISION AGRICULTURE. UN/AUSTRIA SYMPOSIUM on SPACE APPLICATIONS FOR FOOD SYSTEMS held on 7TH - 9TH SEPTEMBER,2021. Retrieved from: <https://www.unoosa.org/documents/pdf/psa/activities/2021/UNAustria2021/DAY1/LAWAL.pdf>

20. Lawal, L.S., (2021). NIGERIAN NIGCOMSAT-1R WITH PARTNERS BRINGS CENTIMETER ACCURACY TO AFRICA.61st Meeting of the Civil GPS Service Interface Committee at the Institute of Navigation GNSS+ 2021 Conference held at Union Station Hotel, St. Louis, Missouri on September 20-21, 2021. Retrieved from: <https://www.gps.gov/cgsic/meetings/2021/lawal.pdf>

21. Lawal, L.S., (2021) ADOPTION OF SBAS TECHNOLOGY IN AVIATION SECTOR AT CONTINENTAL LEVEL OF AFRICA. United Nations / Mongolia Workshop on the Applications of Global Navigation

Satellite Systems held at Ulaanbaatar, Mongolia on 25 – 29 October 2021. Retrieved from: <https://www.unoosa.org/documents/pdf/psa/gnss/Mongolia2021/1-07.pdf>

22. L. S. Lawal et al.(2022), "A review of telemedicine and its potential in developing countries," 8th International Conference on Mechatronics Engineering (ICOM 2022), Online Conference, Kuala Lumpur, Malaysia, 2022, pp.32-40, doi: 10.1049/icp.2022.2261. Retrieved from: <https://ieeexplore.ieee.org/abstract/document/9964174>

23. L. S. Lawal et al., "Overview of Satellite Communications and its Applications in Telemedicine for the underserved in Nigeria: A case study," 2022 International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), Maldives, Maldives, 2022, pp. 1-10, doi: 10.1109/ICECCME55909.2022.9988286. Retrieved from: <https://ieeexplore.ieee.org/document/9988286>  
keywords: {Satellite constellations;Pediatrics;Mechatronics;Telemedicine;Satellite broadcasting;Telephony;Electronic healthcare;Digital Health;Telemedicine;Satellite Communication;Internally Displaced Persons (IDPs);Mobile Health;Telecommunications},

24. L. S. Lawal et al.,(2023). "Internally Displaced Persons (IDPs) in Nigeria: An Overview of Health Situation" published by International Journal of Health, Safety and Environment (IJHSE). Retrieved from: [https://www.researchgate.net/publication/366055703\\_Internally\\_Displaced\\_Persons\\_in\\_Abuja\\_An\\_Overview\\_Of\\_Health\\_Situation\\_and\\_Solution](https://www.researchgate.net/publication/366055703_Internally_Displaced_Persons_in_Abuja_An_Overview_Of_Health_Situation_and_Solution)

25. L. S. Lawal et al.,(2023). Digital Health Inclusion: A Pilot Study of Health Services Deployment Using Communications Satellite for the Underserved in Nigeria. *British Journal of Healthcare and Medical Research*, 10(3), 86–103. <https://doi.org/10.14738/bjhm.103.14715>

26. L.S. Lawal et al.,( 2023). "DFMC SBAS Prototype in Africa," Proceedings of the 36th International Technical Meeting of the Satellite Division of The Institute of Navigation (ION GNSS+ 2023), Denver, Colorado, September 2023, pp. 12-22. <https://doi.org/10.33012/2023.19179>

27. L.S. Lawal., "Update on Augmented Navigation for Africa (ANGA)". United Nations Sponsored/Finland Workshop on the Applications of Global Navigation Satellite Systems. Jointly organized by The United Nations Office for Outer Space Affairs and The National Land Survey of Finland co-organized and co-sponsored by The International Committee on Global Navigation Satellite Systems, The Finnish Meteorological Institute, The University of Vaasa, The Nordic Institute of Navigation, and U-blox, 23 – 26 October 2023, Helsinki, Finland. Retrieved from: [https://www.unoosa.org/documents/pdf/psa/activities/2023/GNSS2023/GNSS2023\\_02\\_05\\_rev1.pdf](https://www.unoosa.org/documents/pdf/psa/activities/2023/GNSS2023/GNSS2023_02_05_rev1.pdf)

28. L.S. Lawal, "Implementation of Telecommunication Corridor on Infrastructure Roll Out (Rail, Road, Powerlines and Inland Waterways) to Fast Track Broadband Penetration and Nation-Wide Surveillance". *International Journal of Information and Communication Sciences (IJICS)*. (ISSN Online: 2575-1719; ISSN Print: 2575-1700) Vol 10 (1) 23-33 DOI:10.11648/j.ijics.20251001.13 Retrieved from: <https://www.sciencepq.com/article/10.11648/j.ijics.20251001.13>

29. L.S. Lawal., Tasiu Wudil., & Francis Adedeji. "Situational Awareness in Electricity Distribution Networks in Nigeria using Micro-Phasor Measurement Units (µPMUs)" *Academia Green Energy* 2025, 2(2), <https://doi.org/10.20935/AcadEnergy7659>

30. L.S. Lawal. (2025), "NEED FOR GNSS POLICY TO HELP FAST-TRACK IMPLEMENTATION OF CONTINENT-WIDE SATELLITE-BASED AUGMENTATION SYSTEM (SBAS) FOR AFRICA" MedCrave/Aeronautics Journal; Aeronautics and Aerospace Open Access Journal (AAOAJ) - eISSN: 2576-4500 2025;9(1):79-86. DOI: [10.15406/aaaj.2025.09.00223](https://doi.org/10.15406/aaaj.2025.09.00223)

31. Lasisi Salami Lawal, Francis Ayomide Adedeji (2025). Mineral Exploration Beyond Our Planet Earth and Advances in Mining. , 10(13), <https://doi.org/10.51584/IJRIAS.2025.101300012>.

32. LAWAL, L. S., & SAIDU, I. (2026). LEVERAGING SATELLITE NAVIGATION AND EARTH OBSERVATION TECHNOLOGIES FOR SUSTAINABLE AGRICULTURAL PRODUCTIVITY AND FOOD SECURITY. *International Journal of Agriculture and Agricultural Technology*, 10(1). <https://doi.org/10.70382/caijaat.v10i1.007>

## RESEARCH METHOD

My research methods includes but not limited to conducting investigation, case studies, surveys and action research into developmental or complex problems using research based knowledge and methods comprising of design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusion, utilizing modern tools such as simulation software and artificial intelligence (i.e weka) to create, select and apply appropriate techniques, resources for prediction, modeling and optimization to developmental and complex engineering activities, with understanding of the limitations. Open to new tools to fast-track my scholarships in complex, aerospace, socio-technical and environmental systems.

## RELATED SUSTAINABLE DEVELOPMENT GOALS (SDG)

### RESEARCH

- 4 Quality Education
- 11 Sustainable Cities and Communities
- 3 Good Health and Well Being
- 1 No Poverty
- 2 Zero Hunger
- 7 Affordable and Clean Energy
- 9 Industry, Innovation and Infrastructure
- 13 Climate Action
- 4 Quality Education
- 5 Gender Equality
- 10 Reduced Inequalities
- 16 Peace, Justice and Strong Institutions
- 17 Partnerships for the Goals

## RESEARCH FIELDS

- Satellite Communications: Utilizing Communications Satellite for Disaster preparedness, recovery and emergency service delivery such as healthcare services
- Satellite Applications covering:
  - Tele-Medicine as a Panacea to Medical Tourism in Africa Exploiting Communication Satellites
  - E-Learning Solutions via Communication Satellites
  - Effective Broadband Service Delivery via Communication Satellite
  - Assets Monitoring and Tracking through GNSS and SBAS
  - Satellite Communication in Mobile Ad-hoc Networks/ Vehicular ad-hoc Networks (MANET/VANET)
  - SBAS Integration with Unmanned Aerial Vehicle Design and Development for precise navigation;
  - Navigation System (GNSS & SBAS) for Autonomous Systems, Guidance, Navigation and Control (GNC), Unmanned Aerial Vehicles (UAVs), Precision Agriculture, Disaster Preparedness, Monitoring and Management.
- Space Systems and Satellite Technologies: Small Satellites, Cubesat and Cansat Researches
- Satellite Project Engineering Management
- Digital Engineering and Telecommunications
- Mechatronics and NewSpace 2.0 utilizing Artificial Intelligence (AI)
- Ethical Considerations and Geo-Regional Influence in the use of Artificial Intelligence (AI) for Industrial Automation, Health and Autonomous System Applications etc

## SOME EXTERNAL CONTRIBUTIONS, ENGAGEMENTS/APPOINTMENTS

- **Instructor/Tutor for Low Earth Orbit Communication Satellites and Applications In Digital Economy Era with International Telecommunication Union (ITU) Academy** under Capacity and Digital Skills Development (CSD) Division of ITU at Digital Bridge Institute, Abuja. 2025 to Date
- **Academic Advisory Board Member** of The International Education Management Agency (IEMA), UK, 2025 to Date
- **Board Member, Engineering Regulation Monitoring and Enforcement (ERM & E) & Chair, Aerospace & Aviation Sector, Council for the Regulation of Engineering in Nigeria (COREN).** ABUJA, NIGERIA, 2024 to Date.
- **Panel Member, The IET (Institution of Engineering and Technology) Achievement Medals,** 2023 to Date.
- **Technical Transactions Board Member,** Nigerian Institute of Electrical and Electronic Engineers (NIEEE), 2023-2025
- **Accreditor to University Engineering Programmes,** Council for the Regulation of Engineering in Nigeria (COREN). ABUJA, NIGERIA, 2018 to Date.

- **Vice-Chair, International Telecommunication Union Radiocommunication (ITU-R) Satellite Study Group 4 (SG-4)**, Geneva, Switzerland, 2023-2027.
- **Acting General Manager**, Technical Directorate, Nigerian Communications Satellite Ltd, Abuja, 2007 to Date
- **Editorial Board Member** of Nigerian Society of Engineers' Magazine, Abuja, 2022 to Date.
- **Senior Research Fellow**, Summit University, Offa, Kwara State, 2022 to 2024
- **Principal Investigator and Senior Research Fellow**, Federal University of Technology, Minna, Niger State, 2021 to 2022.
- **Editorial Board Member** of American Journal of Engineering and Technology Management (AJETM), 2021 to Date.
- **Contract Expert No.CT-EX2015D258412-102)** to Research Executive Agency of European Commission on HORIZON-CL4-2025-04 on advancing Generative AI (GenAI) initiatives in Africa. Oct 2025-Nov. 2025
- **Research Expert (Contract Expert No.CT-EX2015D258412-101)** to Research Executive Agency of European Commission on ICT 58 on International partnership building between European and African innovation hubs. July, 2020 to Oct. 2020.
- Senior Life Member of The American Institute of Aeronautics and Astronautics (AIAA).
- Member, Space Systems Technical Committee (SSTC) of The American Institute of Aeronautics and Astronautics (AIAA).
- Member, Systems Engineering Technical Committee (SETC) of The American Institute of Aeronautics and Astronautics (AIAA).
- **Nigerian Project Manager**, Satellite Based Augmentation System, 2018- 2024.
- **Board Member**, Engineering Bureau Services Board of Nigerian Society of Engineers (NSE), Abuja, 2018-2021.
- **Visiting Research Fellow**. National GNSS Center, Wuhan University, China. 2018-2018
- **Member, ICT Systems Thematic Group**, The Science and Technology Policy Commission (STPC) of Nigerian Economic Summit Group (NESG), Lagos State, Nigeria, 2017-2022.
- **Vice Convener**, International Telecommunication Union (ITU) Resolution 609 Consultation Meeting, Geneva, Switzerland, 2016-2019.
- **National Project Manager**, Central Bank of Nigeria/Nigerian Communications Satellite Ltd Cashless Policy Implementation across 6 Geo-Political Regions of Nigeria with reliable and resilient Point-of-Sales (POS) Machines. 2011 to 2014.
- **National Member**, ICT Technical Working Group, National Planning Commission, Abuja, 2013 to 2013.
- **Post-Doctoral Researcher**, School of Engineering and Informatics, University of Sussex, United Kingdom 2014 to Date.
- **Doctoral Researcher and Teaching Assistant**, School of Engineering and Informatics, University of Sussex, United Kingdom 2011 to 2014.
- **Project Consultant**, Radio Al Fayda 90.1MHz FM Station, Kaolack – Dakar, Senegal, 2008 To 2008.
- **Technical Assistant** to MD/CEO of NIGCOMSAT LTD, Abuja, 2007-2014.
- **Satellite Project Engineer 1**, National Space Research and Development Agency, Abuja, 2004 to 2007
- **Head of Networks and Maintenance** Department, InterNetworks Ltd, Abuja, 2001 to 2004

- **Kogi State Technical Co-ordinator** (STC 1) on Behalf of SAGEM (French Company) on National Identity Card Project by the then Department of National Civic Registration (DNCR) and now the National Identity Management Commission (NIMC) 2002-2002.
- **Database & Network Engineer**, Management Information System and Data Processing (MIS & DP), Nigerian Telecommunications Ltd, 2000 to 2001.

#### **TUTORING/MENTORING EXPERIENCE AND ENGAGEMENTS**

- ACTINSPACE Mentor; International Hackathon in space application co-organized by the Centre National d'Études Spatiales (CNES); the French national space agency and European Space Agency (ESA).
- Mentor for Africa Prize for Engineering Innovation launched in 2014 by the Royal Academy of Engineering.
- Volunteer & Mentor, The Institution of Engineering (IET)
- Volunteer & Mentor, African Space Foundation (ASF)
- Mentor, Evaluator and Judge, The American Institute of Aeronautics and Astronautics (AIAA) Undergraduate Team Space Design Competition.
- Evaluator and Judge, The American Institute of Aeronautics and Astronautics (AIAA) Space System Award.
- Mentor, Evaluator and Judge, The American Institute of Aeronautics and Astronautics (AIAA) Undergraduate Team Space Design Competition.
- Mentor, Evaluator and Judge, The American Institute of Aeronautics and Astronautics (AIAA) & The AIAA Space Systems Technical Committee (SSTC) National Student Essay Contest.
- Mentor and Innovation State Judge, United States Space Center Houston CONRAD Challenge; Collaborate, Educate & Innovate and Design Tomorrow, Today.
- Trainer, Numerous National Training Capacity Building Programmes

#### **OTHER MERITS OF RELEVANCE**

- Invited Special Guest Speaker on National Dialogue on Decent Job Creation, with Theme: *From Vulnerability to Opportunity: Strengthening Frameworks and Strategies for Decent Job Creation for Youth And Women* at National Human Right Commission (NHRC) Auditorium Maitama Abuja on 23<sup>rd</sup> July 2025.
- Keynote Speaker and Panelist on African Excellence Collaborative Space Research in STEM and Beyond: African-Led Research in the Space Sector at SPACE UNGANA Conference, Cosmopolitan University, Abuja, Nigeria from 19<sup>th</sup> to 26<sup>th</sup> July, 2025.
- Keynote Speaker and Panelist at Maiden Africa & Middle East Space Conference (AMESC) at UM6P Venue, Rabat, Morocco on 5<sup>th</sup> to 8<sup>th</sup> February, 2025 (Sponsored by Organizers)
- Speaker and Panelist at 2024 NewSpace in Africa Conference as invited by African Union Commission (AUC) with theme "The role of space in closing Africa's poverty gap", Luanda, Angola from 2<sup>nd</sup> to 5<sup>th</sup> April, 2024 (Sponsored by AUC).
- Presented a paper titled " Continental Cost Benefit Analysis (CBA) for Utilization of GNSS Applications and Implementation of SBAS Services in Africa" at United Nations International Meeting on the Application of Global Navigation Satellite Systems Co-organized and co-sponsored by The International Committee on Global Navigation Satellite Systems of The United

Nations Office for Outer Space Affairs (UNOOSA) on 5th to 9th December 2022 at Vienna International Centre, Vienna, Austria (Sponsored by United Nations).

- Invited Speaker and Panelist at Kenya Space Expo and Conference 2022 with Theme "Leveraging Space Capabilities for National Development" Organized by Kenya Space Agency from 15 to 17 June, 2022 at Sarit Expo Centre, Nairobi, Kenya. Papers Presented are:
  - Leveraging GNSS Technology for the Aviation and Non-Aviation Sectors in Africa.
  - Capacity Building via Transfer of Practical Satellite and Space Engineering Skills: A Case for Implementation of Kenya's Small Satellite Design, Assembly, Integration and Test Center (DAITC). (Sponsored by Kenya Space Agency).
- \$42,000.00 Research Grant Award in December, 2021 as the Principal Investigator (PI) for a project titled Tele-medicine as a Panacea to Medical Tourism in Africa exploiting Communication Satellite Technologies was one of the winning proposals in the international research competition organized by the International Telecommunication Unions (ITU) Connect2Recover initiative; the first ever international research competition organized by the ITU. The competition which received 307 entries from 80 countries across five continents had 15 outstanding winners which include our research project.
- Distinguished Lecturer Award by Nigerian Society of Engineers (Giri Branch) for Maiden edition of Engr. Mrs. Aishatu Aliyu Umar Distinguished Lecture with Theme as: Application of Space Technology; A tool for enhancing National Security; 19 August, 2019.
- Second Best Position Award in Capacity Building Program for Directors, Deputy Directors and Assistant Directors of MDAs by Korea International Cooperation Agency (KOICA) and Federal Ministry of Communications and Digital Economy at Public Service Institute of Nigeria (PSIN); Jan. 2016.
- Among one of the University of Sussex, United Kingdom Role Models: 12 Sussex Stories in Nigeria
- MSc Distinction by University of Sussex, United Kingdom on 22nd January, 2011 with part scholarship for a PhD Programme (The MSc and PhD Programme was sponsored by Federal Government of Nigeria).
- Outstanding Graduating Trainee Engineer at Shenzhou Institute, China Academy of Space Technology, CAST; Beijing, January, 2007
- Federal Capital Territory National Youth Service Corps Award for Outstanding Community Services in July, 2001
- Most Creative graduating student, School of Engineering and Engineering Technology, Department of Electrical and Computer Engineering, 1999
- Dean's List Award, School of Engineering and Engineering Technology (SEET), Federal University of Technology, Minna, 1995, 1996, 1997, 1998 & 1999.

## CERTIFICATIONS

- Certificate in Grant Writings and Funding Workshop by Leaders of Africa Institute (LAI) Certificate No. GFWF-2025-8742965, 2025.
- Certificate of Participation in Master Your Editing & Reviewing Skills of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Participation in Master Panel: And what the books do not teach! Tips from the Pros of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Participation in Master Webinar: Reporting Statistical Results of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Participation in Publishing for Impact of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Participation in Reading, Writing, and Publishing in Natural Sciences of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Participation in Introduction to Digital Humanities as Interdisciplinary Research Methodology of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Participation in Mixed-Methods Research of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Participation in Citations Manager: Mendeley of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Participation in Data Visualization with 'R' of the Research Methodology Course 2025 by Forman Christian College (A Chartered University).
- Certificate of Completion on Electricity Transition Playbook online Course by Climate Compatible Growth, ICTP, OpTIMUS & UKaid with contributions by Green Grid Initiative, The Open University, Imperial College London, University of Oxford, UCL, KTH, Climate Parliament, Loughborough University, & Centre for Global Equality, 19/04/2025
- Certificate of Completion on Modelling, Policy & Political Economy online Course by Climate Compatible Growth, ICTP, OpTIMUS & UKaid with contributions by Green Grid Initiative, The Open University, Imperial College London, University of Oxford, UCL, KTH, Climate Parliament, Loughborough University, & Centre for Global Equality, 19/04/2025
- Certificate on Climate Change online Course by The Oxford Climate Society January to March, 2025
- Guidelines for the Long-term Sustainability of Outer Space Activities Certification, 11/01/24
- Space Law for New Space Actors (Part 1 & 2) Certification, 11/01/24
- Certificate as Advisor on Green Marketing Challenge, 11/01/24
- Space Economy Certification, 11/01/24
- Certificate of Award in Recognition of International Webinar participation CanSat/Rocketry Championship, 06/01/22
- Certificate on Design Thinking, 06/01/20
- Certificate on Basics of Project Management, 06/01/20
- Certificate on Basics of Innovation Management, 06/01/20
- Certificate on Change Management, 06/01/20
- Certificate on Digital Transformation, 06/01/20
- Certificate on Risk Management, 06/01/20

- Diploma in Innovation Management, 06/01/20
- Diploma in Program Management, 06/01/20
- HarvardX W47X: Entrepreneurship in Emerging Economies, 06/01/20
- Certificate on Leadership and Team Development, 06/01/20
- Newtec Certificate of Attendance on Newtec Dialog Certified Operations Professional, 02/01/19
- Certified Management Consultant (CMC), 12/01/18
- Certification on Professional use of SatMAster Software for Satellite Link Budget Calculation, University of Los Angeles (UCLA), 10/01/08
- Global VSAT Installer Training Certificate (GVF) for Level 1, 2, 3 (Global VSAT installer) & Level3i, 06/01/08
- COMPTIA A+ Core Hardware Certification, 09/01/06
- Microsoft Certified Professional Certification, 08/01/06
- ESSEMTEC CERTIFIED TRAINING ON SURFACE MOUNT TECHNOLOGY (SMT) for Printed Circuit Board (PCB), Lucern, Switzerland, 04/01/05
- Compaq Accredited Platform Specialist, 06/01/02
- Premised Warranty Training Certification on Krone Networking Products, 03/01/01

## **PROFESSIONAL NETWORKS AND MEMBERSHIPS IN ACADEMIA AND INDUSTRY**

- Fellow, Nigerian Society of Engineers (FNSE;19408)
- Fellow, The Nigerian Institute of Electrical and Electronic Engineers (NIEEE; 00499)
- Fellow, Nigerian Institute of Space Engineers (FNISEng 0032)
- Fellow, African Scientific Institute (FASI)
- Fellow, The Institute of Management Consultants (FIMC.ABJ.1963.18)
- Member, Council for the Regulation of Engineering in Nigeria (COREN R. 16,264)
- Senior Member and Life Member, American Institute of Aeronautics and Astronautics (SMAIAA 417701)
- Senior Member, Institute of Electrical and Electronic Engineers (MIEEE 90454403)
- Member, International Institute of Communications (ICC #39869)
- Member, Nigerian Institute of Management (MNIM 259690)
- Member, Certified Management Consultant (CMC)
- Member, Engineering Council of UK; Chartered Engineer (CEng; 590976)
- Member, Project Management Institute (MPMI; 1524520)
- Member, The Institution of Engineering and Technology (MIET 1100111798)
- Professional Member, Society of Satellite Professionals International (MSSPI 6838516)
- International Member, National Space Society (MNSS 2090295)
- Member, Royal Aeronautical Society (MRAeS 2001490)
- Member, International Association of Engineers (MIAENG 156941)
- Member, Society of Manufacturing Engineers (MSME 14496648)
- Member, Association of Computer Machinery (ACM 8999063)

## **ENTREPRENEURIAL ACHIEVEMENTS (PATENTS)**

- DIGITAL ELECTRONIC BALLOT COUNTER BOX; Patent no. RP, 14,631 on 31 July, 2001 and sealed on 15th March, 2002 according to Patents and Designs decree 1970 of Federal Republic of Nigeria.
- Other Patents in view