

ABRIDGED CURRICULUM VITAE

1. PERSONAL DATA

Name: AMUSA Kamoli Akinwale

Date and Place of Birth: Oyo

Sex: Male

Nationality: Nigerian

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Name and Address of Next of Kin: Mrs Amusa B. Bolatito, Plot 6, Block J, Gbenga Oyekola Housing Scheme, Oyo

Present Position and Date: Professor; October 1, 2025

Area of Specialisation: Communication Engineering and Signal Processing

2. EDUCATIONAL BACKGROUND

I Educational Institutions Attended (with Dates):

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|---|-----------|
| i. Federal University of Agriculture, Abeokuta, Nigeria | 2012-2017 |
| ii. University of Lagos, Akoka, Nigeria | 2008-2011 |
| iii. University of Ilorin, Ilorin, Nigeria | 1992-1999 |
| iv. Oranyan Grammar School, Oyo, Nigeria | 1985-1991 |
| v. St. Andrew's Demonstration School, Oyo, Nigeria | 1979-1985 |

II Academic and Professional Qualifications (with Dates):

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|---|------|
| i. Ph.D. Electrical and Electronics Engineering (Communication & Digital Signal Processing) | 2017 |
| ii. M.Sc. Electrical and Electronics Engineering (Communication Engineering) | 2011 |
| iii. Registered Engineer, COREN | 2007 |
| iv. B. Eng. Electrical Engineering | 1999 |
| v. Senior School Certificate | 1991 |

III Prizes, Honours and Awards

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| i. Epitome of Hard Work Award, Heritage Echo Newspaper (ISSN 2360-7394). | 2022 |
| ii. Tetfund IBR Grant Award (FUNAAB/DRIP/40) for the Development of a Compact and Affordable RECTENNA for RF Energy Harvesting. | 2022 |
| iii. Tetfund Institution Based Research Grant Award (FUNAAB/DRIP/01) for Synthesis and Fabrication of Nano Architecture Sensor for Monitoring Post-harvest Storage System and Greenhouse Farming. | 2022 |
| iv. Nigerian Communication Commission Research Grant Award for Development of Robotic IoT Connected Livestock Feeder Machine. | 2022 |

3. STUDENTS' PROJECT/THESIS/DISSERTATION SUPERVISION

Degree Categories	Number Completed	Number Ongoing
Undergraduate	Over 50 Completed	6
Master	21 (Major: 7; Co-supervisor: 14)	7 (Major: 1; Co-supervisor: 6)
Ph.D.	4 (Major: 2; Co-supervisor: 2)	8 (Major: 6; Co-supervisor: 2)

4. RESEARCH INTEREST OR COMMISSIONED PROJECTS

- (i) Researches completed
 - 1. Optimized canny edge detector for medical image features extraction & enhancement 2026
 - 2. YorubaAI: bridging language barriers with advanced language models. 2025
 - 3. De-noising of audio signal using machine learning model. 2025
 - 4. Development of natural language processing solution for technical manual information search. 2025
 - 5. Development of a symmetric cryptographic cipher for electronic data transfer using chaotic encryption. 2025
 - 6. Gender classification based on facial information using EfficientNet. 2024
 - 7. Image compression scheme using combined Walsh-Hadamard and bi-orthogonal wavelet transforms. 2024
 - 8. Modelling and analysis of path-loss on digital terrestrial TV links in Abeokuta. 2024
 - 9. Development of web-based and wireless enabled emergency exit control system. 2023
 - 10. Yoruba text compression using wavelet transform and Huffman algorithm. 2023
 - 11. Development of tri-modal method for medical images enhancement. 2022
 - 12. Development of a PC-based American Sign Language (ASL) translator. 2022
- (ii) Researches in progress
 - 1. Development of a mobile App for real-time translation of American Sign Language (ASL) to Yoruba speech.
 - 2. Development of a real-time surveillance system framework for oil and gas pipelines' right of way.
 - 3. Detection and classification of breast cancer in selected medical images using edge-enhanced convolutional neural network.
 - 4. Computer-aided diagnosis of brain tumour from magnetic resonance imaging scan using deep learning technique.
 - 5. Development of block-chain-based electricity meter using Ethereum.

5. PUBLICATIONS

I Summary

- i. Number of Books/ Monographs: 1
- ii. Number of Published Journal Articles: 76
- iii. Number of Conference Proceedings: 24

Total Number of Publication: 101

II. Five (5) Most Recent Publications:

- i. Emmanuel, A.E., **K.A. Amusa**, T.C. Erinosh, M.T. Raji. (2026). Optimised Canny edge detection algorithm for medical image feature mapping and extraction. *Engineering Applications of Artificial Intelligence*, 167(2026) 113763:1-14. <https://doi.org/10.1016/j.engappai.2026.113763>
- ii. Adekola, S.A., **Amusa, K.A.** & Biowei, G. (2025). Impact of 5G mmWave radiation on human tissue using skin, cornea (eye) and enamel (tooth) as study candidates. *Journal of Engineering and Applied Science*, 72(51):1-25. <https://doi.org/10.1186/s44147-025-00617-9>.
- iii. **Amusa, K.A.**, Erinosh, T.C., Nuga, O.O., & Omotoso, A.O. (2025). YorubaAI: Bridging Language Barrier with Advanced Language Models. *Journal of Applied Artificial Intelligence*, 6:39–52. <https://doi.org/10.48185/jaai.v6i1.1474>.
- iv. **Amusa, K.A.**, Idowu, O.A. & Ilori, A.O. (2024). Hybrid UM-LT-AHE technique for contrast enhancement of medical images. *Journal of Engineering and Technology for Industrial Applications*. 10(50):175-183. Published by Galileo Institute of Technology and Education of the Amazon. doi.org/10.5935/jetia.v10i50.1280.

- v. Nuga, O.O., **Amusa, K.A.**, Olanipekun, A.J. & Matthew, S. (2024). Quantized consensus of finite-level multi-agent networked Systems. *International Journal of Advances in Applied Sciences*. 13(1):148-159. Published by Institute of Advanced Engineering and Science, Indonesia. doi: [0.11591/ijaas.v13.i1.pp148-159](https://doi.org/10.11591/ijaas.v13.i1.pp148-159).

6. MAJOR CONFERENCES ATTENDED AND PAPERS PRESENTED

- i. 2025 International Engineering Conference, November 30 – December 4, 2025, Nigeria Society of Engineers (NSE) Annual Conference/AGM, Ibadan, Nigeria.
- ii. 2025 School of Engineering and Engineering Technology (SEET) Conference, June 4-6, 2025, Federal University of Technology, Owerri, Imo State, Nigeria. Papers presented: (a) A Friis-Based Framework for TENG-mmWave Hybridized Energy Harvesting Architecture for Self-Powered Biomedical Implants; (b) Electromagnetic Foundations and Caloric Dynamics of Solar Energy Harvesting: A Maxwellian–PDE Approach with Heat Transfer Modelling; (c) Anatomy of RF Exposure at GSM Frequency Band: SAR Calculations in Realistic Human Head SAM Models; (d) Assessing Thermal Effects of Mobile Communication Signals in Human Tissues: A Multi-layered Analysis using Pennes’ Bioheat and Cole-Cole Models.
- iii. 2024 International Engineering Conference, November 18 - 22, 2024, Nigeria Society of Engineers (NSE) Annual Conference/AGM, Abuja, Nigeria.
- iv. School of Engineering and Engineering Technology (SEET) Annual Conference, November 7-9, 2023, Federal University of Technology Akure, Ondo State, Nigeria. Papers presented: (a) Performance Evaluation of Artificial Neural Network and Fuzzy Logic Techniques for Short-term Electrical Energy Demand Forecasting; (b) Power Quality Enhancement in an Electrical Distribution Network using Shunt Passive Filter.
- v. Obafemi Awolowo University Faculty of Technology Conference, 2022. Paper presented: Application of wavelet transform and Huffman algorithm to Yoruba’ language syntax text files compression.

7. EXTRA-CURRICULAR ACTIVITIES

Reading, athletics, viewing, meeting people and finding ways of resolving problems in order to improve quality of life.