

AKEEM TEMITOPE OTAPO

Principal Lecturer | PhD Researcher in Artificial Intelligence for Healthcare

Yaba College of Technology, Nigeria | Université Paris-Est Créteil (UPEC), LiSSI, France
akeem.otapo@yabatech.edu.ng | akeem.otapo@u-pec.fr | +234 806 405 4825 | +33 7 80 22 10 02

ACADEMIC PROFILE

Principal Lecturer and doctoral researcher with over 16 years of experience in computer engineering education, student supervision, academic administration and engineering practice. Current doctoral research focuses on lightweight multimodal deep-learning and continuous-time models for Alzheimer's disease diagnosis and progression forecasting using imaging, clinical and longitudinal data. Broader expertise includes medical imaging, Internet of Medical Things, signal processing, biometrics, IoT, embedded systems and medical diagnostic equipment support.

RESEARCH INTERESTS

Artificial intelligence for healthcare; multimodal medical imaging; longitudinal and continuous-time learning; lightweight transformers; Internet of Medical Things; signal processing; biometrics; IoT and embedded systems.

EDUCATION

2024–Present PhD Candidate in Engineering Systems Science

Université Paris-Est Créteil (UPEC), Laboratoire Images, Signaux et Systèmes Intelligents (LiSSI), France

- Official thesis title: Development of a Deep Learning Model for detection and prediction of Alzheimer's disease.
- Research focus: multimodal deep learning and continuous-time progression forecasting using MRI, clinical and longitudinal data.
- Supervisor: Prof. Alice Othmani; co-supervisors: Dr Ghazaleh Khodabandelou and Dr Zuheng Ming.
- Funded by the Nigerian Tertiary Education Trust Fund (TETFund), Overseas Scholarship Scheme.

2011–2016 MSc, Electronic and Computer Engineering

Lagos State University, Nigeria

- Thesis: Performance Analysis of Multimodal Biometrics Using Fusion at Score Level Modified Tanh Normalisation.

2000–2004 BSc, Electronic and Computer Engineering

Lagos State University, Nigeria

- Final project: Design and Implementation of a Bio-data-Based Class Attendance System.

1997–1998 National Diploma, Electrical and Electronic Engineering

Federal Polytechnic Ilaro, Nigeria

TECHNICAL AND TRANSFERABLE SKILLS

- **Research and AI:** Deep learning, multimodal learning, medical image analysis, longitudinal modelling, transformers, Neural ODEs, uncertainty estimation, experimental design and scientific evaluation.
- **Engineering and Computing:** IoT/IoMT, embedded systems, signal processing, computer hardware, networking, system installation and maintenance, medical diagnostic equipment support and GPU-based computing.
- **Academic Practice:** Higher-education teaching, student supervision, curriculum development, project assessment, quality assurance, blended learning and research dissemination.
- **Leadership and Management:** Programme coordination, committee service, project planning, staff development, team supervision, stakeholder communication and community project leadership.
- **Languages:** English (Proficient) ; French (developing proficiency)

ACADEMIC AND PROFESSIONAL EXPERIENCE

- 2010–Present** **Principal Lecturer, Department of Computer Engineering**
Yaba College of Technology, Lagos, Nigeria
- Teach National Diploma and Higher National Diploma students in computer engineering and provide service teaching to other departments.
 - Supervise student research, design projects, laboratory work, industrial training and project defence activities; more than 25 projects supervised.
 - Serve or have served as Part-Time Programme Coordinator, Secretary of the Project and Seminar Committee, class adviser and student association staff adviser.
 - Coordinate project allocation, seminar scheduling, assessment and defence processes involving 12 academic and 6 non-academic staff.
 - Departmental champion for Flexible Skills Development, providing blended-learning training and support to 12 academic colleagues.
 - Contribute to curriculum review, quality assurance, flexible learning and staff development.
- 2008–Present** **Logistics and Support Engineer — Part-Time/On-Call**
Amaanat Medical Diagnostic Equipment Ltd, Lagos, Nigeria
- Supervise installation, routine maintenance, troubleshooting and repair at client sites.
 - Provide technical support for X-ray systems, CT scanners, MRI-related systems, C-arm workstations, DICOM printers, UPS systems and associated equipment.
- 2007–2008** **System Engineer**
Farida Computer Technologies, Ota, Nigeria
- Installed, configured, maintained and repaired computer systems and networks.
 - Supported cybercafé setup and administration, intercom services and client-site operations.
 - Managed client sites and supervised teams of at least four employees.

PEER-REVIEWED JOURNAL PUBLICATIONS

1. Sodiq, K., Otapo, A. T., Salu, L., Balogun, P., Oderinu, L., Salau, S., & Awoyoola, O. (2026). Review on prediction of heart attack using traditional and artificial intelligence approaches. *British Journal of Computer, Networking and Information Technology*, 9(2), 1–19. <https://doi.org/10.52589/BJCNIT-ROU9RBQ0>
2. Otapo, A. T., et al. (2025). Prediction and detection of terminal diseases using Internet of Medical Things: A review. *Computers in Biology and Medicine*, 188, 109835. <https://doi.org/10.1016/j.compbiomed.2025.109835>

3. Otapo, A. T., et al (2023). Design and Implementation of an IoT-Based Energy Control and Consumption Meter. Yabatech Journal of Science and Engineering Research.
4. Otapo, A. T., et al (2023). Design of Experiments: Impact of a Replicated 2^k Factorial on the Volume of Foam of Malt Drink. Yabatech Journal of Science and Engineering Research.
5. Otapo, A. T., et al (2022). Design and Implementation of IoT-Based Heartbeat Monitors. Yabatech Journal of Science and Engineering Research.
6. Otapo, A. T., et al (2022). Mobile Technologies as a Driver of the Internet of Things. Yabatech Journal of Science and Engineering Research.
7. Jimoh, R. A., Muhammed, M. A., Bayeri, J. F., Ogunbayo, T. O., & Otapo, A. T. (2021). Simulating a Confined Aquifer Performance from Constant-Rate Pumping Test Data Using the Cooper–Jacob Method and Mathematical Equation. Yaba College of Technology Journal of Science and Society, 7(2).
8. Sodiql, K. A., Saliu, L. A., Otapo, A. T., Abdulraheem, A., & Onadokun, I. O. (2019). Design and Implementation of an Online Past-Question System: A Case Study of the Department of Computer Technology, Yaba College of Technology, Lagos, Nigeria. AIMS Research Journal, 5(3).
9. Sodiql, K. A., Lawal, O. L., Okikiola, F. M., Saliu, L. A., & Otapo, A. T. (2019). Development of a Biometric-Based Crime Investigation System for the Nigeria Police Force, Ipaja, Lagos State. Computing, Information Systems & Development Informatics Journal, 10(2).
10. Sodiql, K. A., Otapo, A. T., et al (2018). Development of an Expert System for Troubleshooting and Repair of the Tecno P3 Smartphone. AIMS Research Journal.
11. Saliu, L. A., Otapo, A. T., & Badejo, O. A. (2015). Design and Implementation of an Electronic Voting System for the National Association of Polytechnic Engineering Students, Yaba College of Technology. Yabatech Journal of Science and Engineering Research, 2(1).
12. Otapo, A. T., et al. (2012). Overview of Automated Biometric Systems, with Emphasis on Iris Recognition for Identifying Monozygotic Twins. Yabatech Journal of Science and Engineering Research, 1(2), 15.
13. Otapo, A. T., et al. (2012). Review of E-Waste Management in Nigeria. Yabatech Journal of Science and Engineering Research, 1(2), 47.

JOURNAL MANUSCRIPTS UNDER REVIEW

1. Otapo, A. T., et al. Optimizing Alzheimer's Disease Diagnosis with MRI and Clinical Data via Lightweight Transformers.
2. Otapo, A. T., et al. Comorbidity-Aware Multimodal Continuous-Time Modeling for Alzheimer's Disease.

SELECTED CONFERENCE PAPERS AND PRESENTATIONS

1. Otapo, A. T., et al. (2026). Enhanced Neural ODE with Multi-Task Feature Selection for Memory-Efficient Multimodal Alzheimer's Disease Progression Forecasting. Conference poster.
2. Otapo, A. T., et al. (2026). Multimodal Multitask Neural ODEs for Continuous-Time Alzheimer's Disease Progression Forecasting. Conference paper
3. Otapo, A. T., et al. (2025). Enhanced Alzheimer's Diagnosis with a Lightweight Transformer: Multimodal Fusion of Sagittal MRI and Clinical Data. 32nd International Conference on Systems, Signals and Image Processing (IWSSIP 2025), Skopje, North Macedonia.
4. Saliu, L. A., Otapo, A. T., et al. (2023). Overview of EEG Datasets, Preprocessing and Classification for Epilepsy Seizure Prediction and Detection. 6th National Conference, School of Engineering, Federal Polytechnic Ilaro, Nigeria.

5. Adelakun, A. A., Otapo, A. T., Saliu, L. A., Sodiq, K. A., et al. (2023). An IoT-Based Energy Management System for Nigerian Home Use. Ogun State Institute of Technology International Conference, Nigeria.
6. Saliu, L. A., Otapo, A. T., et al. (2021). Modern Methods of Electroencephalogram Feature Extraction towards Improved Accuracy. ASUP Zone C National Academic Conference.
7. Sodiq, K., Osokoya, S., Sanusi, K., Jimoh, R., Saliu, L., Otapo, A., & Otunubi, V. (2021). Traffic Characterization of Mobile Networks in Lagos, Nigeria. International Conference on Advances in Communication Technology, Computing and Engineering, Morocco.
8. Saliu, L. A., Otapo, A. T., et al. (2019). Campus-Automated Intrusion Security System. 4th National Conference, Federal Polytechnic Ilaro, Nigeria.
9. Otapo, A. T., et al. (2019). Economic Advantage of Solar Power Systems for Small-Scale Uses in Nigeria. 4th National Conference, Federal Polytechnic Ilaro, Nigeria.
10. Saliu, L. A., Otapo, A. T., et al. (2019). Overview of the Challenges and Solutions of E-Commerce in Nigeria. 4th National Conference, Federal Polytechnic Ilaro, Nigeria.
11. Otapo, A. T., et al. (2019). Office-Automated Intrusion Detection System. 4th National Conference, Federal Polytechnic Ilaro, Nigeria.
12. Otapo, A. T., et al. (2019). Overview of Health Informatics Standards for Semantic Interoperability. ASUP Yabatech 2nd International Conference, Nigeria.
13. Saliu, L. A., Otapo, A. T., & Alashiri, O. A. (2016). Performance and Usage of WiMAX Technology in Lagos and Abuja, Nigeria. International Conference, Federal University of Agriculture, Abeokuta.
14. Otapo, A. T., Sodiq, K. A., & Saliu, L. A. (2015). Bi-Modal Biometric-Based Student Attendance System: The Case of Yaba College of Technology. International Conference on Multidisciplinary Innovations and Technology Transfer, University of Benin, Nigeria.
15. Sodiq, K. A., Adebari, F. A., Otapo, A. T., & Saliu, L. A. (2014). Assessment of Employees' Skills in Selected Cybercafés in Lagos State, Nigeria. International Conference on Science, Technology, Education, Arts, Management and Social Sciences, Afe Babalola University, Nigeria.

TEACHING, SUPERVISION AND ACADEMIC LEADERSHIP

- Over 16 years of teaching experience in computer engineering and related technical disciplines at ND and HND levels.
- Supervised more than 25 student projects in IoT, embedded systems, biometrics, surveillance, networking, health monitoring, renewable energy and software systems.
- Representative projects include Raspberry Pi health monitoring, IoT heartbeat monitoring, IoT energy-control systems, GSM/GPS vehicle tracking, biometric attendance systems, intrusion detection systems and a 4 kW solar power system.
- Experience in programme coordination, project allocation, project defence, seminar scheduling, student advising, SIWES supervision and curriculum review.
- Member of an NBTE curriculum review committee and contributor to flexible, blended and open-distance learning initiatives.

PROFESSIONAL REGISTRATION AND MEMBERSHIPS

- Registered Engineer, Council for the Regulation of Engineering in Nigeria (COREN), Registration No. R.25,621.
- Member, Institute of Electrical and Electronics Engineers (IEEE), since 2013.
- Member, International Association of Engineers (IAENG), Membership No. 253518.
- Member, Nigerian Institute of Management (Chartered) — MNIM, since 2007.

AWARDS AND RECOGNITION

- TETFund Overseas PhD Scholarship, Nigerian Tertiary Education Trust Fund; Award Reference TETF/ES/COE/YABA/TSAS/2022.
- Letter of Commendation for contributions to the Commonwealth of Learning Skills-in-Demand Project, Yaba College of Technology, 2022
- Member, College Project Team for the TETFund Special Intervention Fund Computer Village Lagos Project., 2022

SELECTED TRAINING AND PROFESSIONAL DEVELOPMENT

Date	Training / Professional Development Activity
2026	Scientific Integrity and Research Ethics MOOC — doctoral training (Completed).
2023	Workshop on Grant Proposal Writing, Centre for Research Support and Grant Management, Yaba College of Technology.
2023	SARA and OARAS National Occupational Standard Design, Courseware Development and Implementation for Computer Repairs and Maintenance, Levels 1 and 2.
2021	Certificate of Achievement in Quality Assurance Assessment, National Board for Technical Education/TVET Nigeria.
2021	Courseware Development for Open, Distance and Flexible E-Learning, Yaba College of Technology.
2020	International Computer Driving Licence Training and Certification, Yaba College of Technology.
2019	Enhancing Research Capabilities of Academic Staff through Data Analysis Using SPSS, Yaba College of Technology.
2019	28th COREN Engineering Assembly: Strategic Alliance among Engineering Professionals for Enhanced Opportunities.
2018	Solar Power System Installation and Maintenance, Pings Technologies, Lagos.
2016	Certificate of Achievement in Facilitating Using PowerPoint, Commonwealth of Learning.
2012	Computer-Aided Design and Drafting, Yaba College of Technology.

BOOKS

1. Telecommunication Engineering Fundamentals, Volume 1. Co-authored with F. A. Adebari and K. A. Sodiq.
2. Fundamentals of C++ Programming. Co-authored with K. A. Sodiq.

COMMUNITY AND INSTITUTIONAL SERVICE

2014–Present	Member; Former Community Secretary; Former Chair, Project Committee <i>Ajibogun-Village Community Development Association, Ota, Nigeria</i> • Served as Community Secretary from 2016 to 2020 and as Chair of the Project Committee from 2017 to 2022. • Led coordination of a community electrification project involving concrete poles and electrical distribution connections. • Supported community-development planning for an association serving more than 600 households.
2012–2019	Programme Initiator and Facilitator <i>Ota City Resource Centre, Ota, Nigeria</i>

- Designed and coordinated ICT-proficiency and vocational-skills training for students and school leavers.
- The programme accommodated more than 60 trainees per quarter over several years.