

CURRICULUM VITAE

A. GENERAL INFORMATION

1. **Name:** ADEDEJI Wasiu Oyediran
2. **Date and Place of Birth:** October 10, 1964, Gbongan, Nigeria
3. **Gender;** Male
4. **Nationality:** Nigerian
5. **State of Origin:** Osun State
6. **Local Government Area:** Ayedaade
7. **Marital Stature:** Married
8. **Names and Ages of Children:**
 - (i) Adedeji, Anibaba Victor, 32
 - (ii) Adedeji, Adeogo Benjamin, 30
 - (iii) Adedeji, Obayemisi Deborah, 27
 - (iv) Adedeji, Tobiloba, 21
9. **Name and Relationship of Next of Kin:** Mrs. Adedeji, Adejoke Adepeju (wife)
University Road, Oke-Baale, Osogbo.
+2348126443504
10. **Permanent contact address:** Boredun Community, along Ibokun road,
Osogbo
11. **E-mail address:** wasiu.adedeji@uniosun.edu.ng
12. **Registration with Research gate:** Yes
13. **Link:**
http://researchgate.net/profile/Wasiu-Adedeji?hdr_xprf
14. **If No, Why:** N/A
15. **Registration with Google Scholar:**
<http://scholar.google.com/citations?viewop=listworks&hl=en&authuser=1&user=7LyPTGgAAA>
[AJ](#)
16. **If No, Why:** N/A
17. **Cell Phone Number:** 08037175860
18. **College /Faculty:** SET/Engineering

19. **Department:** Mechanical Engineering
20. **Date and Position on First Appointment:** Senior Lecturer
21. **Present Position & Salary (Grade level and Step):**
Associate Professor/CONNUAS 06/08
22. **Date of Present Position:** October 1st, 2023
23. **Is your appointment confirmed?** Yes
24. **If No, why Not?** N/A
25. **Date of Confirmation of Appointment:** May 4 2023.

B. EDUCATIONAL BACKGROUND

1. Educational Institutions Attended with Dates

- | | | |
|------|--|-------------|
| i. | University of Agriculture, Abeokuta, Nigeria | 2010 - 2015 |
| ii. | University of Lagos, College of Medicine, Lagos, Nigeria | 2008–2009 |
| iii. | University of Ibadan, Ibadan, Nigeria | 1991 -1992 |
| iv. | University of Ibadan, Ibadan, Nigeria | 1984 -1989 |

2. Academic and Professional Qualifications with Date and Issuing Authority

- | | | | |
|------|-------------------------------|-------------------|------------------|
| i. | Ph.D (Mechanical Engineering) | April 17, 2015 | FUNAAB, Abeokuta |
| ii. | M.Sc (Mechanical Engineering) | December 17, 1992 | UI, Ibadan |
| iii. | B.Sc (Mechanical Engineering) | December 22, 1989 | UI, Ibadan |

3. Other Relevant Qualifications:

- | | | |
|----|--|------|
| i. | COREN Registered Engineer (Mechanical) (R. 8813) | 2001 |
|----|--|------|

4. Membership of Professional Bodies

- | | | |
|------|--|------|
| i. | Fellow, Institute of Human Resources and Technical. Development of Nigeria. (0124) | 2017 |
| ii. | Member, International Association of Engineers (MIAENG 189150) | 2017 |
| iii. | Fellow, Nigerian Society of Engineering Technicians. (NISET/008/HF/16) | 2016 |
| iv. | Fellow Nigeria Institute of Safety Engineers (NISE 0022) | 2016 |
| v. | Fellow Institute of corporate Administration (ICAP/PF/14-408) | 2015 |
| vi. | Fellow, Nigerian Institution of Mechanical Engineers (A00439) | 2014 |

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|-------|--|------|
| vii. | Member, Nigerian Institution of Mechanical Engineers (A00439) | 2010 |
| viii. | Member, Nigerian Society of Engineers (08988) | 1998 |
| ix. | Associate Member, Nigerian Institute of Training and Development | 1998 |
| x. | Associate Member, Nigerian Institute of Management | 1998 |

5. Honours, Awards and Distinctions:

- | | | |
|------|--|-------------------|
| i. | Award of Professional Excellence by Nigerian Society of Engineers (NSE) 2016 | |
| ii. | Award of of Postgraduate Scholarship by Federal Government of Nigeria | 1991/1992 session |
| iii. | Recommendation Letter from UNIOSUN | 2023 |

6. Research Fellowships with Dates: Nil

C. WORK EXPERIENCE OUTSIDE THE UNIVERSITY SYSTEM

- i. **Adegboye and Partners (Valuation Engineer- Part Time during Nysc) Estate Surveyors and Values, Sokoto, Sokoto State:** Coordinating of casual workers for the valuation of properties (Sokoto State). Costing of Properties. Identification of equipment by functions (1990-1991).
- ii. **Materials Management services Limited, Ikoyi Lagos:** Project Engineer (1997-1998).
- iii. **Directorate of Food, Road and Rural Infrastructure (DFFI), Sokoto State (1990/1991):** Monitoring Officer. Evaluation of job done by contractor on project. Reporting to the monitoring. Liaising between the Local Government and the monitoring group.
- iv. **C-Side Data Limited, 24 Adeyinka Street, Ilupeju, LAGOS (1991 – 1992):** Systems Officers. Training customers/client. Marketing of training courses, Computer and computer accessories. General administrative of staff and business. Technical Staff. General Office Management.

D. WORK EXPERIENCE IN OTHER UNIVERSITIES

- | | | |
|------|--|----------------|
| i. | Adeleke University, Ede (Post Graduate External Examiner) | 2026 till Date |
| ii. | Hill Side Technical University, Okemesi, Ekiti State (Adjunct Lecturer) | 2025-till Date |
| iii. | Bells University of Technology, Ota (Adjunct) | 2017-2019 |
| iv. | Federal University of Technology, Akure (PG Coordinator, FUTA linkage program) | 2006-2008 |

- | | | |
|------|--|-----------|
| v. | University of Nigeria, Nsukka, (Lecturer, UNN program) | 2004-2008 |
| vi. | Ladoke Akintola University of Technology Ogbomoso (Adjunct Lecturer) | 1994-1996 |
| vii. | University of Ibadan (Lecturer II) | 1993–1997 |

E. WORK EXPERIENCE IN OSUN STATE UNIVERSITY

- | | | |
|------|---|--------------------|
| i. | Acting Head of Department, Associate Professor mechatronics Engineering | (2024 till Date) |
| ii. | Associate Professor, Mechanical Engineering | (2023 – till date) |
| iii. | Acting Head of Department, Senior Lecturer, Mechanical Engineering | (2022-2023) |
| iv. | Senior Lecturer, Mechanical Engineering Department | (2019 - 2023) |

F. CO-CURRICULAR PROFESSIONAL EXPERIENCE

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|----|--|
| i. | Involved in the activities of Nigerian Society of Engineers (NSE) and Nigerian Institute of Mechanical Engineering (NIMechE) at Osogbo Branch and at the national level. |
|----|--|

G. FELLOWSHIPS/MEMBERSHIP OF PROFESSIONAL BODIES

1. National:

- | | | |
|------|---|------|
| i. | Nigerian Institution of Mechanical Engineers (A00439) | 2014 |
| ii. | Nigerian Society of Engineers (08988) | 2010 |
| iii. | Registration with COREN (R.8813) | 2001 |
| iv. | Nigerian Institute of Training and Development | 1998 |
| v. | Nigerian Institute of Management | 1998 |
| vi. | Institute of Corporate Administrators of Nigerian | 2015 |

2. International

- | | | |
|----|--|------|
| i. | International Association of Engineers (MIAENG 189150) | 2017 |
|----|--|------|

H. SERVICES

a) Osun State University

Department of Mechanical Engineering

- | | | |
|----|---------------|------------------|
| i. | Level Advisor | 2019 - till date |
|----|---------------|------------------|

- ii. Chairman, Quality Assurance Committee 2021 – till date
- iii. Acting Head of Department, Mechanical Engineering 2022 – 2023
- iv. Acting Head of Department, Mechatronics Engineering (2024 till Date)

Faculty of Engineering

- i. Reviewer, UNIOSUN Journal of Engineering and Environmental Sciences.
- ii. Member Faculty of Engineering Maintenance Committee 2023 - till date
- iii. Member, Faculty Board 2019 – till date

College of Science, Engineering and Technology

- i. Member, College Board 2022 – till date

University

- i. Senate Member 2022 – till date
- ii. Member, Undergraduate Project Award Committee
- iii. Member, Prose Panel for staff disciplinary case

b) Community

- i. Worked with the CDA of Logburo Community to provide a bridge over an expanse of water-locked road at the entrance to the community by December 2012. (Project cost: N500,000:00)
- ii. Worked with the CDA of Olororo Community to provide 12 poles with wiring for electrification of the community (Project Cost: N240,000:00)
- iii. A financial member of Gbongan Community High School 1984 set to improve facilities at the alma mata
- iv. Worked with an NGO to sponsor free eye medical attention for the Omusoko community in December 2014 (project cost: N2.5million which include drugs, foods clothing).
- v. Worked with Dent-O-Clean marketing department to bring in dental attention to the Agbelura Community (project cost: 1.2million which include food, drug and clothing).
- vi. Luburo Village Community suffering from wide spread poverty propelled sickness and premature death was visited (Project cost: N2.0million which include food, drugs and clothing).
- vii. The President of Redeemers' friends International that makes monthly visitation to prisons (Ije-Ode and Abeokuta), hospital (Shagamu Teaching Hospital) and Police cell (Ibafo)

c) National:

- | | |
|---|-----------|
| i. National Youth Service Corps (NYSC) | 1990-1991 |
| ii. Proctor UTME (Senatorial District), Lagos | 2017 |
| iii. Proctor (Edun-Abon) | 2024-2025 |

iv. International:

- i. Reviewer: Journal of Experimental Agriculture International (Certificate of Excellence in Reviewing) London. 04/05/2024. Certificate No.: PRJEA1116542ADE)
- ii. Reviewer: Asian Journal of Advances in Research (Certificate of excellence in peer-reviewing) 06/01/2024. Certificate No.: MBIMPH/PR/Cert/3144/ENG.

I. COURSES TAUGHT DURING THE CURRENT ACADEMIC SESSION

Undergraduate Courses

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|---|---------|
| i. Applied Thermodynamics (MEE 309) | 2 units |
| ii. Advanced Heat Transfer (MEE 502) | 2 units |
| iii. Fluid Machinery (MEE 503) | 2 units |
| iv. Basic Fluid Mechanics (GET 205) | 2 units |
| v. Fluid Power Engineering (MEE 514) | 3 units |
| vi. Engineer in Society (GET 101) | 2 units |
| vii. Introduction to mechatronics Engineering (MEE 101) | 2 units |

Postgraduate Courses

- | | |
|--|---------|
| i. Experimental Design in Mechanical Engineering (MEE 704) | 2 units |
| ii. Advanced Fluid Mechanics (MEE 721) | 2 units |
| iii. Laminar and Turbulence Viscous Flows (MEE 720) | 2 units |
| iv. Independent Research Project (MEE 735) | 6 units |
| v. Engineering Economics (MEE 703) | 2 units |
| vi. Quality Management (MEE 706) | 3 units |

J. GRADUATE STUDIES SUPERVISION:

a) Doctor of Philosophy

- i. Ademokoya Francis Olukunle (2023). Energy, Exergy and Carbon IV Oxide emission estimation and sustainability in selected manufacturing companies in Nigeria – Supervision ongoing.
- ii. Olajiire Samson Oludare (2023). Modelling of Biogas from Anaerobic coal digestion of fruit-vegetable waste and cow dung using artificial neural networks – Supervision ongoing
- iii. Adekoya Anthony Olayinka (2024): Smart Traffic controls – Graduated
- iv. Engr. Ogunade (2024): Corrosion Remediation – Supervision ongoing

b. Masters of Engineering Research Project

- i. Adufe Jesuye (MEE/2014/0008): Dynamic forces set up at pipe bends -Graduated
- ii. Kolawole Oluwaseyi: Energy Studies and sustainability –Graduated
- iii. Fanifosi: Dual Powered Tyre Inflator - Graduated
- iv. Ajenikoko: Kaolin Beneficiation -Graduated
- v. Adetayo O.O.: - Kaolin Beneficiation – Graduated
- vi. Dayo, Fuzzy logic in materials handling - Graduated
- vii. Williams – Effect of Load on Lithium Battery- Graduated.

c. Postgraduate Diploma Research Project (FUTA linkage programme)

- i. Evaluation of Energy Utilization in a Private Company August 2005
- ii. Design and Construction of Animal Weighing Equipment for 10kg (maximum capacity) August 2005
- iii. Fabrication of a Briquetting Machine for Municipal Solid Water August 2005
- iv. Reconditioning of A Radiator Flushing Engine Washing Machine February 2004
- v. Modelling of Waste Disposal in Mushin Area of Lagos State June 2005
- vi. Re-designing and construction of the Automobile Workshop Gate February 2005
- vii. Modelling of Waste Disposal in Oshodi-Ilupeju Industrial Area of Lagos State June 2005
- viii. Analytical Survey of Energy Utilization Patterns in a Densely Populated Lagos Residential Area-Mushin as Case Study. September 2010

- ix. Coconut Water as Quenchant for Improved Mechanical Property and Hardenability of Plain Medium Steel October 2011
- x. Design and Assembly of Steaming Engine for Radiator of Automobile Engines February 2005
- xi. Pattern of Energy usage in Nigeria February 2004
- xii. Design and Construction of Yam Flour Crushing and Grinding Machine. May 2006
- xiii. The Design and Construction of a Dual Purpose and dual Powered cooker March 2005.

K. THESIS/DISSERTATION

- i. Adedeji, W. O. (2015). Energy, Exergy and Carbon (IV) Oxide Emission Estimation of Food and Beverage Manufacturing Companies in Lagos, Nigeria. PhD. Thesis. FUNAAB. Abeokuta.
- ii. Adedeji, W. O. (1992): "Plant and Equipment Reliability using Fuzzy Logic" M.Sc Thesis, University of Ibadan, Nigeria.
- iii. Adedeji, W. O. (1989): "Development of Anti-vibration System" B.Sc. Dissertation, University of Ibadan, Nigeria.
- iv. Adedeji, W. O. (2009): "Heath Effect of Waste Management in Lagos State" PGD (HSE) Dissertation, University of Lagos, (Consultancy) Lagos, Nigeria.

L. PUBLICATIONS

Summary to indicate number, spread and progress since last promotion (Score:)

(I) Books (authored/co-authored):

1. **Adedeji, W.O.**, Olukayode Olakunle, Ismaila Badmus, Adeniyi Oluwole Adesina (2026). The making of an Engineer, University of Lagos Press, Yaba Lagos, Nigeria. ISBN: 978-978-61981-6-3

[Publisher: University of Lagos Press, Yaba Lagos, Nigeria] *Onshore*

E-mail: unilagpress@unilag.edu.ng

- II. Books (edited/co-edited): Nil
- III. Monographs: Nil
- IV. Chapter in a book: Nil

V. Articles in learned journals:

2. Adekoya O. A., **Adedeji W. O.**, Oyelami S, and Adeboye B. (2026). **Application of Linear Programming to Reduce Traffic Congestion in Urban Centers: A Case Study of Lagos State Transport Authority.** *R.E.M. (Rekayasa Energi Manufaktur) Journal* | Vol.11 No.2. ISSN online (2528-3723).
[Publisher: Universitas Muhammadiyah Sidoarjo, Indonesia] *Offshore*.
<http://doi.org/10.21070/rem.v11i2.1848>
3. Olajire S. O., Alamu O. J., Oyelamia S., **Adedeji W.O.**, Oyewoa A. T., and Ojerinde I. A. (2026). **Optimisation of Mixing Ratios for Enhanced Biogas Production from Anaerobic Co-Digestion of Some Selected Bio-Wastes Using Machine Learning Techniques.** *Sohag Engineering Journal (SEJ)*. DOI: 10.21608/sej.2026.492666.1110.
[Publisher: Faculty Of Engineering – Sohag University] *Offshore*.
<https://sej.journals.ekb.eg/>
4. **Adedeji, W.O.**, Taiwo S. Amosun (2026). **Model Predictive Control for Autonomous Vehicle Navigation in Dynamic Environment.** *Journal of Engineering, Emerging Technologies and Applied Sciences*. Volume: 03 Issue: 01. ISSN: 1116-4514. Access point: <https://www.ndu.edu.ng/jeetas>.
[Publisher: Niger Delta University, Delta State, Nigeria] *Onshore*
<https://www.ndu.edu.ng/jeetas>.
5. Anthony Olayinka Adekoya, Adekunle Philips Adewuyi, **Adedeji, W.O.**, Busayo Adeboye, Seun Oyelami and Abideen Temitayo Oyewo (2026). **Design and Implementation of a Smart Energy Monitoring System for Multi-Socket Outlets using IoT.** *Daha Internationall University Academic journal*. Vol. 5, No. 1. <https://orcd.org/0009-0006-0862-6587>.
[Publisher: Daha International University, Mogadishu, Somalia] *Offshore*
<https://orcd.org/0009-0006-0862-6587>.
6. **Adedeji, W.O.** (2026). **Robust Control Systems in Harsh Environments.** *Faculty of Natural and Applied Sciences Journal of Applied and Physical Sciences*. Volume 3; Issue 1. Page No. 63-70. Print ISSN: 3026-9857. DOI: <https://doi.org/10.63561/japs.v3i1.1184>
[Publisher: Faculty of Natural and Applied Sciences, Ignatius Ajuru University of Education, Ramuolumeni, Rivers State, Nigeria.] *Onshore*
www.fnasjournals.com
7. **Adedeji, W.O.** (2026). **Automation in Water Treatment and Waste Management: A Deterministic Assessment.** *OAUSTECH Journal of Engineering and Intelligent Technology*, Vol. 2 Issue 1. DOI: <https://doi.org/10.5281/zenodo.20079796>.

- [Publisher: School of Engineering and Engineering Technology, Olusegun Agagu University of Science and Technology (OAUSTECH), Okitipupa, Nigeria.] *Onshore*
<https://doi.org/10.5281/zenodo.20079796>.
8. **Adedeji, W.O.** (2026). **Impact of Automation Efficiency, Product Quality, and Regulatory Compliance in Pharmaceutical Manufacturing: A Quantitative Survey Study.** *OAUSTECH Journal of Engineering and Intelligent Technology*, Vol. 2 Issue 1. DOI: <https://doi.org/10.5281/zenodo.20079737>.
[Publisher: School of Engineering and Engineering Technology, Olusegun Agagu University of Science and Technology (OAUSTECH), Okitipupa, Nigeria.] *Onshore*
<https://doi.org/10.5281/zenodo.20079737>.
 9. **Adedeji, W.O.,** Seun Oyelami, Olayinka A. Adekoya and Abideen T. Oyewo (2026). **Fault Detection and Diagnosis in Industrial Automation using Machine Learning-Based Predictive Maintenance.** *Nigerian Journal of Applied Science and Innovative Technology*. (NiJASIT), Volume 2 Number 1: 75-86. ISSN: 1595-9562
[Publisher: Published by College of Engineering, Bells University of Technology, Ota, Nigeria.] *Onshore*
<https://nijasit.bellsuniversity.edu.ng>
 10. **Adedeji, W.O.,** Clement A. Ogunlade, Toyese F. Oyewusi, Seun Oyelami, Oriyomi O. Adetayo and Williams A. Adetola (2026). **Effect of Load and Operational Time on the Performance of Lithium-Ion Batteries.** *Uniosun journal of Engineering and Environmental Sciences*. Vol. 8 No. 1.
[Publisher: Faculty of Engineering and Environmental Sciences, Osun State University, Osogbo, Nigeria.] *Onshore*
<https://journals.uniosun.edu.ng/ujees/article/view/479>
 11. **Adedeji, W. O.,** Adetayo, O. O., Ojerinde, B.J., Ajiboye, A.G., Yekeen, A.I., Pelemo, J., Molokwu, I.M., Okpara I.N. and Fanifosi J.O. (2026). **Fuzzy Logic-Based Energy Management System for Hybrid Renewable Energy Sources.** *Int. J. Renew. Energ & Environ Vol.4 (1)*, pp 435-464.
[Publisher: National Centre for Energy and Environment, Energy Commission of Nigeria, University of Benin] *Onshore*
<https://ijree.com/index.php/publications/article/view/53/48>
 12. Olakunle Olukayode, Joshua B. Ojerinde, Titus O. Ajewole, **Adedeji, W. O.** and Onisokumen J. Imbre (2026). **Design of a PET Plastic-Loop Robotic Gripper with a Soft-Rigid Palm for**

Adaptive and Enveloping Grasping. *FME Transactions* 54, 174-183 1. doi: 10.5937/fme2601174O.

[Publisher: Faculty of Mechanical Engineering, University of Belgrade.] *Offshore*

https://www.mas.bg.ac.rs/_media/istrazivanje/fme/vol54/1/14_o._olukayode_et_al.pdf

13. **Adedeji, W. O.,** S. Oyelami, A. T. Oyewo, A.G. Abioye, B. J. Ojerinde, and A.O. Adekoya (2025). **Design and Development of Machine Learning-Based Traffic Predictions.** *OAUSTECH Journal of Engineering and intelligent Technology*. Vol. 1 Issue 1. DOI:10.36108/ojeit/5202.10.0102.

[Publisher: School of Engineering and Engineering Technology, Olusegun Agagu University of Science and Technology (OAUSTECH), Okitipupa, Nigeria.] *Onshore*

14. **Adedeji, W. O.,** Olukayode, O., Oyelami, S., Adekoya, O., Ojerinde, B.J. and Akinola O.J (2025). **Drone (UAV) for Monitoring traffic Light Violation.** *Uniosun Journal of Engineering and Environmental Sciences (UJEES)*, 1. DOI: 10.36108/ujees/5202.70.0163

[Publisher: Faculty of Engineering and Environmental Sciences, Osun State University, Osogbo, Nigeria.] *Onshore*

15. **Adedeji, W.O.,** Olowu, J.K., Adeniran, M.K., Oyelami, S., Adeboye B., Rajan, J., Jose, S., Benrajesh, P., and Oke, S.A. (2025). **Green Supplier Evaluation and Selection in the Manufacturing Industry using the Taguchi-VIKOR Methods.** *International Journal of Industrial Engineering and Engineering Management*, 7(1), 1-15. E-ISSN: 2685-4090 DOI:<https://doi.org/10.24002/ijieem.v7il.7778>

[Publisher: Zhejiang University, china] *Offshore.*

<http://ojs.uaajy.ac.id/index.php/IJIEEM>

16. **Adedeji, W. O.,** I. K. Okediran, B. J. Ojerinde, O. Adetayo and A. I. Yekeen. (2025). **Safety and Risk in Engineering Practice: A Panacea to Soci-Technical System Sustainability.** *OAUSTECH Journal of Engineering and intelligent Technology*. Vol. 1 Issue 2. DOI: <https://doi.org/10.5281/zenodo.17394388>.

[Publisher: School of Engineering and Engineering Technology, Olusegun Agagu University of Science and Technology (OAUSTECH), Okitipupa, Nigeria.] *Onshore*

<https://doi.org/10.5281/zenodo.17394388>

17. **Adedeji, W. O.,** I. K. Okediran, B. J. Ojerinde, O. Adetayo, and A. I. Yekeen. (2025). **Implementation of the Sustainable Development Goals in Nigeria: A Prognostic Appraisal.** *OAUSTECH Journal of Engineering and intelligent Technology*. Vol. 1 Issue 2. DOI: <https://doi.org/10.5281/zenodo.17394590>.

- [Publisher: School of Engineering and Engineering Technology, Olusegun Agagu University of Science and Technology (OAUSTECH), Okitipupa, Nigeria.] *Onshore*
<https://doi.org/10.5281/zenodo.17394590>
18. **Adedeji, W. O.** (2025). **Autonomous Mobile Robot Path Planning Using Reinforcement learning in MATLAB.** *Uniosun Journal of Engineering and Environmental Sciences (UJEES)*, Vol. 7 No. 2. DOI: <https://doi.org/10.64980/ujees.v7i2.433>.
[Publisher: Faculty of Engineering, Osun State University, Osogbo, Nigeria.] *Onshore*
<https://doi.org/10.64980/ujees.v7i2.433>
 19. **Adedeji, W. O.,** Adetayo, O. O., Pelemo, J., Oderinde, B. J., Okediran, I. K., Molokwu, M. I., Owoyomi, M.O., & Adufe, J. (2025). **AI-Driven Smart Factories: From Predictive Maintenance to Autonomous Production Systems.** *Faculty of Natural and Applied Sciences Journal of Computing and Applications*, 2(4), 87–94. <https://doi.org/10.63561/jca.v2i4.1078>. Print ISSN: 3026-8133.
[Publisher: Faculty of Natural and Applied Sciences, Ignatius Ajuru University of Education, Ramuolumeni, Rivers State, Nigeria.] *Onshore*
<https://doi.org/10.63561/jca.v2i4.1078>
 20. Yakubu Umar Abdullahi, Sunday Ayoola Oke, John Rajan, Swaminathan Jose and **Adedeji, W. O.,** (2024). **Couple Taguchi-Pareto-Box Behnken Design-Grey Wolf Optimization Decisions when Boring IS 2062 E250 Steel Plates on CNC Machine.** *Engineering Access*. Vol. 10, No. 1. doi: 10.14456/mijet.2024.4.
[Publisher: The Faculty of Engineering, Mahasarakham University, Thailand] *Offshore*
<https://ph02.tci-thaijo.org/index.php/mijet/article/view/247410>
 21. Meshach Chukwuebuka Ikedue, John Rajan, Swaminathan, Sunday Ayoola Oke, and **Adedeji, W. O.,** (2024). **Optimization of Wire Electrical Discharge Machining Process Parameters in AZ91 Magnesium Alloy using Taguchi-Based Fuzzy Analytic Hierarchy Process (TFAHP) Method.** *Engineering Access*. Vol. 10, No. 1, 2024. ISSN-2730-4175(online). Doi:10.14456/mijet.2024.2.
[Publisher: The Faculty of Engineering, Mahasarakham University, Thailand] *Offshore*
<https://ph02.tci-thaijo.org/index.php/mijet/article/view/247497>
 22. **Adedeji W.O.,** Olukayode O., Oyewole K.A., Alawode K.O., Okedere B.O., Ojerinde B.J, and Adekoya O.A. (2024). **Development of an IOT-Based Mobile Robot for Hazardous Gas Detection.** *LAUTECH Journal of Engineering and Technology*. 18(1) 2024. Pp 1-9. [Publisher: Ladoke Akintola University of Technology, Nigeria] *Onshore*

<https://laujet.com/index.php/laujet/article/view/607/468>

23. Emmanuel Ege, A.O Adelugba, **Adedeji, W. O.**, Samuel Iyiola Oni, Sunday Ayoola Oke and Charles Asenime (2023). **An Assessment of Vehicle Transport-Induced Air Pollution along a traffic Corridor in Lagos.** *IJEM (Indonesian Journal of Industrial Engineering and Management)*. Vol. 4, No. 3, Pp. 343-364. ISSN(print): 2614-7327 ISSN(online): 2745-9063.
[Publisher: Universitas Mercu Buana, Indonesia] Offshore
<http://publikasi.mercubuana.ac.id/index.php/ijiem>
<https://doi.org/10.22441/ijiem.v4i3.20556>
24. Sawyerr, B.A., Fasina, E., **Adedeji, W. O.**, Martins, S.A., Rajan, J. and Oke, S.A. (2023). **Application of Fuzzy Hierarchy process (FAHP) to Improve Precision and Certainty on Safety Conformity Evaluatonin a Bottling Plant.** *International Journal of Industrial Engineering and Engineering Management (IJIEEM)*, Vol. 5, No. 1., Pp. 15-30. e-ISSN: 2685-4090.
[Publisher: Universitas Atma Java Yogyakarta, Indonesia] Offshore
<http://ojs.uaajy.ac.id/index.php/IJIEEM/current-issue>
25. **Adedeji, W. O.**, Kasali Aderinmoye Adedeji, John Rajan, Oluseye Adebayo owolabi, Sunday Ayoola Oke, Elkanah Olaosebikan Oyetunji (2023). **A Fuzzy-Genetic Modelling Approach to Maintenance Scheduling for the Minimization of Fishing Vessel Idle Time in Maritime Industry.** *IJEM (Indonesian Journal of Industrial Engineering and Management)*. Vol. 4, No. 3, Pp. 240-251. ISSN (print): 2614-7327, ISSN (online): 2745-9063.
[Publisher: Universitas Mercu Buana, Indonesia] Offshore
<http://publikasi.mercubuana.ac.id/index.php/ijiem>
<https://doi.org/10.22441/ijiem.v4i3.20460>
26. Seun Oyelami, Oyetunji B. okedere, Kehinde Oyewole, Kazeem O. Rabi, Oguntola J. Alamu, Olakunle Olukayode and **Adedeji, W. O.** (2023). **Ambient Air Emission Profiles of Polycyclic Aromatic Hydrocarbons around a Typical University Power House in Nigeria.** *Tanzania Journal of Engineering Technology*. ISSN 1821-536X (Print); ISSN 2619-8789 (electronic)
[Publisher: University of Dar es Salam, Tanzania] Offshore
<http://doi.org.10.52339/tjet.v42i3.835>
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49. **Adedeji W.O.**, Ademokoya F.O., Adekoya A.O. and Molokwu M.I. (2024). Energy, Exergy Sustainability and Carbon-IV-Oxide Emission Estimation of Manufacturing Systems in Nigeria. 3rd International Conference on Engineering and Environmental Sciences (ICEES) 2024. Theme: Innovative Technology for Resource Utilization and Environmental Sustainability 25th -28th November, 2024.

Books reviews

i. Technical Reports: **Nil**

ii. Patents and Inventions: 1

50. Olakunle OLUKAYODE, Titus Oluwasuji AJEWOLE, **Wasiu Oyediran ADEDEJI** and Busayo Sunday ADEBOYE (2023). **PATENT TITLE: Screw Actuated Folding Crane. Patent Acceptance Registration Number: F/PT/NC/2013/7681.** Patent and Design Act CAP 344, LFN 1990. Federal Ministry of Industry, Trade and Investment Commercial Law Department. Federal Republic of Nigeria.

iii. On-line journal articles: Nil

L. CURRENT RESEARCH ACTIVITIES

i. Funded Research: Nil

ii. Non-funded/Self-sponsored Research:

- i. Programmable logic controllers-based temperature control system
- ii. Automatic pick and place conveyor transfer using programmable logic controller
- iii. Programmable controllers-based sorting system using metal detection
- iv. Application of WASPAS method to select exhaust emission parameters in vehicle logistics services.
- v. Green supply evaluation and selection in a manufacturing industry using the Fuzzy VIKOR method.
- vi. Design and fabrication of drone for Agricultural purposes

M. CONFERENCES ATTENDED

- i. 2nd International Conference On Engineering And Environmental Science (ICEES). Faculty of Engineering and Environmental Sciences, Osun State University, Osogbo, November 23-25, 2021.

- ii. 1st International Conference on Engineering and Environmental Sciences (ICEES). Faculty of Engineering and Environmental Sciences, Osun State University, Osogbo, November 5-7, 2019.
- iii. 20th Examination Ethics Conference and Awards between 20th - 24th March 2017 at Transcorp Hotel, Calabar.
- iv. UNESCO-NIGERIA TVE Revitalization Project, South west Zonal Center, Yaba College of Technology, Staff Training Development and Training Workshop on the Implementation of new Technical and Vocational Education, August 5 – 7, 2002.

N. EXTRA-CURRICULAR ACTIVITIES

Reading and Researching

O. ANY OTHER RELEVANT INFORMATION

1. COREN representative at the NBTE resource inspection at Ibarapa Polytechnic, Eruwa 2016
2. Resource personnel at the NBTE accreditation/Re-accreditation exercise at Delta State Polytechnic, Ogwashi-Uku March, 2017

P. SUMMARY OF CONTRIBUTION TO KNOWLEDGE

The main focus of my research are in the areas of;

- a. Thermo fluid (b). Application of Mechatronic Principles (c). Energy and environmental studies and; (d). Production Engineering and others in the general area of mechanical engineering research.

There are fifteen papers in Thermo fluid and Energy studies. There are seventeen papers in Application of mechatronics principles. There are sixteen papers in production and general Engineering. Eleven papers in Design of equipment while are six papers in the areas of Engineering material.

A typical engineering research is either fundamental (Theoretical or experimental) or applied (Technical/Developmental Research, Survey and Case Study).

Papers (1, 4, 11, 14, 18, 28) are fundamental researches, they are positive additions to the body of scientific knowledge in some specific useful forms in Industrial/Production Engineering practice. Papers (8, 15, 16, 17, 19, 20, 21, 22 and 23) are applied researches in technical/developmental works, they all studied and developed physical object for intended purposes of practical utility productions. Papers (6, 10) are applied research works based on survey where contributory solution were made available to some existing problems in the industries (Environmental, Safety, Production). Papers (5, 7, 8) are applied research works in case study formats. The findings have very good applications in making business oriented decisions and development of strategic business plans. Papers (5, 17) were mechanical engineering design of equipment to solve both national and international development. Paper (50) is publication in engineering material researches which is a search for cheaper, better materials and usage of engineering material resources.

My research output more succinctly put are:-

- i. **The Book:** on the making of an Engineer is fundamentally a research work articulated to provide a solid professional Engineering background for both student and practicing Engineers.

The Journals

Paper 2: The finding from this work offers actionable support for planners and demonstrate the significant pattern of mathematical programming in evidence based urban transport policy.

PAPER 3: This show how machine learning can be useful with regards to optimizing the anaerobic digestion process and support a data-focused method to increase the efficiency of biogas output while simultaneously facilitating the sustainable conversion of waste to energy.

PAPER 4: the work demonstrate the potential of model predictive control to improve the safety and efficiency of autonomous vehicle navigation in dynamic environment.

Paper 5: The system demonstrates the practicality of socket-level monitoring for efficient energy management in homes, hostels, and small offices.

Paper 6: The research work provides detailed frameworks to be used by industry stakeholders, policymakers and researchers to advance the robust control systems to foster resilience and competitiveness in the Industry 4.0 paradigm. It will fill an important gaps and provide empirical knowledge, theoretical ideas, and practical solutions that enable an operation in severe conditions.

Paper 7: The study shows that although automation can revolutionize the sector, its full potential cannot be realised without addressing financial, technical and institutional challenges through strategic interventions such as technical training, financial incentives, sound policy frameworks and stakeholder cooperation.

Paper 8: The study brought to light that automation is a critical enabler of operational excellence in the pharmaceutical sector, with substantial benefits for efficiency, quality, and compliance.

Paper 9: By simultaneously addressing cost, infrastructure, and skill barriers, this immediately deployable system enables predictive maintenance for millions of resourceconstrained SMEs, delivering substantial economic, operational, and environmental impact.

Paper 10: The study contributes to the body of knowledge in battery management to optimize discharge control and effective battery thermal management strategies.

Paper 11: This contributes to the flexibility, ef iciency and reliability of HRES by dynamically responding to fluctuations in energy generation and demand. As per the paper, using fuzzy logic together with artificial intelligence and machine learning can also help improve forecasting and decision-making.

Paper 12: The gripper successfully demonstrated ability to grasped objects of various shapes, sizes, weights, and textures.

Paper 13: This work underscores the potential of AI-driven solutions for improving traffic management systems in smart cities. Future research will focus on real-time deployment and model optimization for scalable urban applications

Paper 14: The work developed an intelligence, Autonomous UAV enabled solution for traffic situation where smart solution becomes inevitable.

Paper 15: This demonstrates that the developed methods adequately represent the optimized values and ranks obtained using the field data set from literature.

Paper 16: It recommended institutionalizing a safety-first culture, improving compliance monitoring, and investing in continuous safety education and technology to ensure safer engineering practices.

Paper 17: This research contributes valuable insights for policymakers, development practitioners, and stakeholders aiming to enhance sustainable development efforts in Nigeria.

Paper 18: The research provides insight into the applicability of RL for Autonomous robust navigation and proposes potential optimization for real world deployment

Paper 19: Findings demonstrate that PdM achieves up to 97.3% accuracy in failure prediction, reducing downtime by 50% and costs by 10–40%, while autonomous systems, exemplified by Tesla’s Gigafactory, boost throughput by 30%.

Paper 20: the outcome of this study may be a route to reducing time and money associated with unnecessary usage of non-optimal boring data during operations planning decisions.

Paper 21: The contribution obtained from this study are suitable for use by process engineers in the machining industry for cost effective machining decisions.

Paper 22: Results from experimental trials demonstrate the efficiency and effectiveness of the proposed system in detecting and mapping poisonous gas concentrations, providing a valuable tool for environmental monitoring and emergency response.

Paper 23: The novelty of this work is the proposal of a robust dataset and analysis on the concentration of certain pollutants (CO, SO₂ and NO₂) and emission severities in Lagos, which serves as a cornerstone approach to developing and implementing transportation and environmental policy in Lagos.

Paper 24: The principal difference between the present method and the analytic hierarchy process approach is integrating fuzzy application to the analytical hierarchy process to provide a more accurate safety conformity assessment, yielding reliable and informative results representing the vagueness of the bottling process decision-making process.

Paper 25 The model advanced promises to provide vessel controllers with an idle time assessment framework, which enhances the chances of generating the utmost profit for companies

Paper 27: The findings suggest that PLC-based temperature control systems offer promising solutions for achieving reliable and effective temperature management in diverse industrial environments.

Paper 29: The principal advantage of the rank selection method introduced in the present study is to avoid quick convergence. This article is beneficial to the process engineers aimed at improving the wire electrical discharge machining process.

Paper 45: this works underscore the potential of PLC based automation in enhancing dam operation and management across various applications, including water supply, irrigation and power generation.

Paper 37: offered an efficient and reliable solution for fire detection and extinguishing, incorporating both automated and manual control mechanisms.

Paper 38: demonstrate a cost effective, affordable and efficient method of automating water level and consumption in a tank.

Paper 42: This shows that shear strength property becomes similar as moisture content increases. It can also be concluded that different moisture contents influence the mechanical properties of solid waste.

Paper 43: This article offers new methods to establish the parametric values of the electrohydraulic forming process for machining composites made of AA1100 sheets.

Paper 44: All post-consumer plastic wastes considered in the study can be utilized for energy production via thermochemical processing as revealed from their decomposition behavior and pyrolysis kinetics. It is a contribution to waste to wealth scenario of waste recycling.

Paper 47: Methane gas emitted can be harvested and utilized as a renewable source of energy thereby mitigating pollution environmental occasioned by the release of methane into the atmosphere from dumpsites most especially from developing countries towards ensuring a sustainable city.

Paper 45: The automated drainage system find wide-ranging applications across various sectors, including industries, hospitals, and residential settings.

Paper 46: from the work, it is evident that reducing energy wastage during the production process and promoting sustainability are crucial for minimizing bread production costs.

Paper 48: may be a very useful tool of waste management for the Government, Engineering applications and an easier means of ensuring a healthier living environment for the masses.

Referred Conference proceedings

49. (ICEES) 2024: By interconnection Energy, Exergy, Sustainability and Carbon-IV-Oxide estimation, the paper underscores the importance of integrating sustainable practice with energy and exergy analysis to achieve overarching sustainability goals.

50. Patent: presented a novel approach to design of soft robotic gripper by conclusively demonstrating a concept of holding objects in between two non-elastic flexible strips of material intention and releasing it when slackened.

REFEREES

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