

CURRICULUM VITAE

A. GENERAL INFORMATION

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|---|---|
| 1. Name: | ADEDEJI Joseph Adeleke |
| 2. Date and Place of Birth: | 19th November, 1995/Minna. |
| 3. Gender: | Male |
| 4. Nationality: | Nigeria |
| 5. State of Origin: | Osun State |
| 6. Local Government Area: | Ilesha East |
| 7. Marital Status: | Single |
| 8. Names and Ages of Children | N/A |
| 9. Name and Relationship of Next
of Kin with Telephone Number: | ADEDEJI, Serah Adenike (Sister) 090694708897 |
| 10. Permanent Contact Address: | Zone 3, ilupeju community, onward junction, Osogbo. |
| 11. E-mail Address: | joseph.adedeji@uniosun.edu.ng |
| 12. Registration with Research Gates: | Yes |
| 13. Research Gate Link: | https://www.researchgate.net/profile/Joseph-Adedeji |
| 14. If No: | Not Applicable |
| 15. Registration with Goggle Scholar: | Yes |
| 16. Goggle Scholar Link: | https://scholar.google.com/citations?hl=en&user=x6sb_i0AAAAJ |
| 17. If No: | Not Applicable |
| 18. Cell Phone Number: | +2348160882380 |
| 19. College/Faculty/Unit | Science, Engineering and Technology/Basic and Applied Sciences |
| 20. Department: | Mathematical Sciences |
| 21. Position on First Appointment
with the University: | Graduate Assistant |
| 22. Present Position and Salary: | Lecturer II (CONUASS 3) |
| 23. Date of Present Position | 01-08-2025 |
| 24. Is your appointment confirmed | No |
| 25. If No, why Not? | Confirmation is subject to PhD completion |

26. Date of Confirmation of Appointment N/A

B. EDUCATIONAL BACKGROUND

1. Educational Institutions Attended with Dates

- | | |
|---|-----------|
| i. Osun State University, Osogbo, Nigeria | 2021-2025 |
| ii. Osun State University, Osogbo, Nigeria. | 2019-2021 |
| iii. Osun State University, Osogbo, Nigeria. | 2013-2018 |
| iv. Command Secondary School, Niger, Minna State. | 2007-2012 |
| v. El- Bethel Nursery and Primary School, | 2000-2007 |

2. Academic and Professional Qualifications with Dates

- | | |
|---|------|
| i. Doctor of Philosophy Degree (Ph.D.) in Applied Mathematics | 2025 |
| ii. Master of Science Degree (M.Sc.) in Applied Mathematics (Distinction Grade) | 2021 |
| iii. Bachelor of Science Degree (B.Sc. Hons) in Mathematics (First Class) | 2018 |
| iv. Senior School Certificate Examination (SSCE) | 2012 |
| v. Junior School Certificate Examination (JSCE) | 2009 |

3. Other Relevant Qualifications NIL

4. Honours, Awards and Distinctions

- | | |
|--|------|
| i. First Class Honors (Osun State University) | 2018 |
| ii. Late Maria Ajike Scholarship (Award of Excellence) | 2017 |
| iii. National Institute of Mathematics National Competition
(Bronze Winner Award) | 2017 |
| iv. University Prize for First Class Student | 2016 |

5. Research Fellowship with dates NIL

C. WORK EXPERIENCE OUTSIDE THE UNIVERSITY SYSTEM

Best Solution Polytechnic, Akure Ondo State, Department of General Studies 2019

D. WORK EXPERIENCE IN OTHER UNIVERSITIES

Federal University of Agriculture and Development Studies Iragbiji (FUADSI) 2026

E. WORK EXPERIENCE IN OSUN STATE UNIVERSITY

Graduate Assistant, Assistant Lecturer and Lecturer II 2020 - Date

F. CO-CURRICULAR PROFESSIONAL EXPERIENCE: NIL

G. MEMBERSHIP OF PROFESSIONAL BODIES:

The Nigerian Association of Mathematical Physics (NAMP)
Nigerian Society of Physical Sciences

H. SERVICE:

- | | | |
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| i. | University | |
| | Osun State University, Osogbo | 300,400 Level Mathematics
Student (Level Adviser) |
| ii. | Community | NIL |
| iii. | National | NIL |
| iv. | International | NIL |

I. COURSES TAUGHT DURING THE CURRENT ACADEMIC SESSION

MTH 101: General Mathematics I, **MTH 102:** General Mathematics II, **MTH 203:** Linear Algebra I, **MTH 206:** Introduction to Numerical Analysis, **MTH 213:** Set, Logic & Algebra.

J. GRADUATE STUDIES SUPERVISION: NIL

K. PUBLICATIONS:

1. Olayiwola M.O. & **Adededeji, J.** (2024). ON ANALYSIS OF A MATHEMATICAL MODEL OF CHOLERA USING CAPUTO FRACTIONAL ORDER: ON ANALYSIS OF A MATHEMATICAL MODEL OF CHOLERA. *Journal of the Nigerian Mathematical Society*, 43(3), 287-309. **Publisher:** Nigerian Mathematical Society - Onshore
2. Olayiwola, M. O., Yunus, A. O., Ismaila, A., & **Adededeji, J. A.** (2025). Modeling within-host Chikungunya virus dynamics with the immune system using semi-analytical approaches. *BMC Research Notes*, 18(1), 1-15. **Publisher:** Springer - Offshore
3. Oladapo, A. O., Olayiwola, M. O., Adedokun, K. A., Adedapo, A. I., **Adededeji, J. A.**, Kabiru, K. O., & Yunus, A. O. (2023). Mathematical analysis of sensitive parameters on the dynamical transmission of HIV-malaria co-infection. *Jambura Journal of Biomathematics (JJBM)*, 4(1), 37-45. **Publisher:** Universitas Negeri Gorontalo - Offshore
4. Alaje, A. I., Olayiwola, M. O., Adedokun, K. A., **Adededeji, J. A.**, & Oladapo, A. O. (2022). Modified homotopy perturbation method and its application to analytical solitons of fractional-order Korteweg–de Vries equation. *Beni-Suef University Journal of Basic and Applied Sciences*, 11(1), 139. **Publisher:** Springer - Offshore
5. Yunus, A. O., Olayiwola, M. O., Adedokun, K. A., **Adededeji, J. A.**, & Alaje, I. A. (2022). Mathematical analysis of fractional-order Caputo's derivative of coronavirus disease model via Laplace Adomian decomposition method. *Beni-Suef University Journal of Basic and Applied Sciences*, 11(1), 144. **Publisher:** Springer - Offshore

6. Alaje, A. I., Olayiwola, M. O., Adedokun, K. A., **Adedeji, J. A.**, Oladapo, A. O., & Akeem, Y. O. (2023). The modified homotopy perturbation method and its application to the dynamics of price evolution in Caputo-fractional order Black Scholes model. *Beni-Suef University Journal of Basic and Applied Sciences*, 12(1), 93. **Publisher:** Springer – Offshore

L. CURRENT RESEARCH ACTIVITIES

Articles in Review

Adedeji, J. & Olayiwola M.O. (2025). Modeling the Impact of Treatment and Drug Resistance on the Within-Host Dynamics of Tuberculosis

M. CONFERENCES ATTENDED

The Nigerian Association of Mathematical Physics (NAMP) 2021

Paper read: M.O. Olayiwola and J.A Adedeji, “Numerical Solutions of Systems of Equations of fractional order”

N. EXTRA-CURRICULAR ACTIVITIES

Exercising and writing computer codes.

O. SUMMARY OF CONTRIBUTION TO KNOWLEDGE

This study presents a novel approach to disease modeling by incorporating fractional-order derivatives, demonstrating their significant impact on understanding the complex dynamics of infectious diseases. It offers comprehensive within-host insights into tuberculosis transmission, emphasizing the critical roles of antibody-mediated immunity and cytotoxic T lymphocytes (CTLs) in infection control. The research also deepens the understanding of cholera transmission dynamics, revealing that high vaccination coverage in vulnerable regions substantially reduces the risk of outbreaks. Furthermore, the study introduces a fast and efficient computational technique for constructing diverse fractional-order models, enhancing the accuracy and applicability of disease simulation frameworks.

Adedeji, Joseph Adeleke

STAFF NAME

SIGNATURE

11– 11 - 2025

DATE