

1 Personal Information

Full Name	Matthew Olayiwola ADEWOLE
Gender	Male
Citizenship	Nigerian
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2 Education

- **Ph.D., Mathematics**, May, 2017.
University of Ibadan, Ibadan.
Oyo State,
Nigeria.
- **M.Sc., Mathematics**, March, 2013.
University of Ibadan, Ibadan.
- **BTech., Pure and Applied Mathematics**, January, 2008.
Ladoke Akintola University of Technology, Ogbomoso,
Oyo State.

3 Projects/Thesis

- Ph.D. Thesis
Galerkin Approximation of a Nonlinear Parabolic Interface Problem on Finite and Spectral Elements.
Supervisor: Late Prof V.F. Payne
- M.Sc. Project
Spatially Discrete Approximation of Linear Parabolic Interface Problems on Unfitted Finite Element.
Supervisor: Dr V.F. Payne
- Undergraduate Project
A Mathematical Model of Temperature Rise During Microwave Heating: Exponential Law.
Supervisor: Late Prof R.O. Ayeni

4 Work Experience

Date	Organization
Nov'17–date	Mountain Top University, Kilometre 12, Lagos-Ibadan Expressway, Prayer City, Ogun State, Nigeria.

Courses Taught at Undergraduate Level

- (a) Ordinary Differential Equations I
- (b) Numerical Analysis I
- (c) Real Analysis I
- (d) Metric Space Topology
- (e) Probability II
- (f) Introduction to Operations Research
- (g) Introduction to Mathematical Modelling
- (h) Theory of Ordinary Differential Equations
- (i) Theory of Partial Differential Equations

5 Research Interests

- Numerical Methods for Partial Differential Equations
- Mathematical Biology (Dynamics of infectious and non-infectious diseases)
- Integro-Partial Differential Equations with interfaces

6 Papers/Publications

6.1 Articles in Referred Journals

6.1.1 Publications in the recent 5 years

1. T. Faniran, A. Ali, **M.O. Adewole**, B. Adebo and O.O. Akanni (2022)
[Asymptotic behavior of Tuberculosis between smokers and non-smokers.](#)
Partial Differential Equations in Applied Mathematics (Elsevier), Vol. 5, 100244. **Indexed: Scopus**
2. **M.O. Adewole**, A.P. Okekunle, I.A. Adeoye and O.M. Akpa (2022)
[Investigating the Transmission Dynamics of SARS-CoV-2 in Nigeria: A SEIR Modelling Approach.](#)
Scientific African (Elsevier), Vol. 15, e01116. **Indexed: WoS, Scopus**
3. **M.O. Adewole**, A. Onifade, A.I.M. Ismail, T. Faniran and F.A. Abdullah (2022)
[Analysis of Transmission Dynamics of Cholera: An Optimal Control Strategy.](#)
Journal of Applied Nonlinear Dynamics. Vol 11, Issue 2, Pages 387–400. **Indexed: Scopus**
4. T.S. Faniran and **M.O. Adewole** (2022)
[Analysis of a Cholera Model With Treatment Noncompliance.](#)
International Journal of Nonlinear Analysis and Applications. Vol 13, Number 1, Pages 29–43.
Indexed: WoS, Scopus

5. N. I. Okposo, **M.O. Adewole**, E. N. Okposo, H. I. Ojarikre and F. A. Abdullah (2021)
A Mathematical Study on a Fractional COVID-19 Transmission Model Within the Framework of Nonsingular and Nonlocal Kernel.
Chaos, Solitons and Fractals (Elsevier), Vol 152, Number 111427. **Indexed: WoS, Scopus**
6. **M.O. Adewole**, A.A. Onifade, F.A. Abdullah, F. Kasali and Ahmad I. M. Ismail (2021)
Modeling the Dynamics of COVID-19 in Nigeria.
International Journal of Applied and Computational Mathematics (Springer), Vol 7, Number 67, pages 1–27. **Indexed: Scopus**
7. **M.O. Adewole** (2021)
Approximation of Quasilinear Hyperbolic Problems with Discontinuous Coefficients: An Optimal Error Estimate.
Bulletin of the Iranian Mathematical Society (Springer) Vol 47, Number 6. **Indexed: WoS, Scopus**
8. **M.O. Adewole** (2020)
FEM-IDS for a Second Order Strongly Damped Wave Equation with Memory.
Computers & Mathematics with Applications (Elsevier), Vol 80, Issue 12, pages 2896–2914. **Indexed: WoS, Scopus**
9. **M.O. Adewole** (2019)
Approximate Solution of Nonlinear Hyperbolic Equations with Homogeneous Jump Conditions.
Journal of Numerical Analysis and Approximation Theory, Vol 48, Issue 2, pages 122–136.
10. **M.O. Adewole** (2019)
Approximation of Linear Hyperbolic Interface Problems on Finite Element: Some New Estimates.
Applied Mathematics & Computation (Elsevier), Vol 349, pages 245–257. **Indexed: WoS, Scopus**
11. **M.O. Adewole**, V.F. Payne (2018)
Linearized Four-Step Implicit Scheme for Nonlinear Parabolic Interface Problems
Turkish Journal of Mathematics, Vol 42, Issue 6, pages 3034 – 3049. **Indexed: WoS, Scopus**
12. **M.O. Adewole** (2017)
Almost Optimal Convergence of FEM-FDM for a Linear Parabolic Interface Problem
Electronic Transactions on Numerical Analysis, Vol 46, pages 337 – 358. **Indexed: WoS, Scopus**

6.1.2 Other Publications

1. **M.O. Adewole**, A.A. Onifade (2013)
A mathematical model of dracunculiasis epidemic and eradication
IOSR Journal of Mathematics (IOSR-JM), Vol 8, Issue 6, pages 48 – 56.
2. V.F. Payne, **M.O. Adewole**, S.A. Ajibola (2012)
A finite element method and its convergence for an elliptic interface problem
Pioneer Journal of Advances in Applied Mathematics,
Vol 6, Issues 1 & 2, pages 25 – 44.

6.2 Chapter in a Book

1. M. Adeniyi, S. Oke, M. Ekum, T. Benson and **M.O. Adewole** (2022)
Assessing the impact of public compliance on the use of non-pharmaceutical intervention with cost-effectiveness analysis on transmission dynamics of COVID-19: Insight from mathematical

modeling. Book chapter on "Modelling, control and Drug Development for COVID-19 Outbreak Prevention" Studies in Systems, Decision and Control (Springer) Vol 366, page 579–618.
Indexed: Scopus

6.3 Accepted Articles

1. **M.O. Adewole**, Ahmad I. M. Ismail, Farah A. Abdullah and Taye S. Faniran
Extinction of Cholera Using Deterministic and Stochastic Models Incorporating Vigilant Human Compartment

6.4 Preprints and Submitted Articles

- T.S. Faniran, **M.O. Adewole**, H. Ahmad and F.A. Abdullah
Dynamics of Tuberculosis in HIV-HCV Co-infected Cases
- **M.O. Adewole**
Finite Element Solution of a Class of Parabolic Integro-Differential Equations with Nonhomogeneous Jump Conditions using FreeFEM++

6.5 Under Preparation

- **M.O. Adewole**, N.I. Okposo, A.P. Okekunle and F.A. Abdullah
Investigating the impact of vaccination on the dynamics of COVID-19 in the presence of infected immigrants: A case study of Nigeria
- T.S. Faniran, **M.O. Adewole**, N.I. Okposo and F.A. Abdullah
Unaware and Aware Asymptomatic Zika Virus Cases in Caputo Derivative Sense

7 Conferences Attended

1. **Conference:** International Conference on Contemporary Mathematics and the Real World
Venue: University of Ibadan, Ibadan, Oyo State
Date: 6th–9th May, 2017
Presentation: Convergence of a Finite Element Solution for a Nonlinear Parabolic Equation with Discontinuous Coefficient
2. **Conference:** The 29th Colloquium & Congress of The Nigerian Association of Mathematical Physics (NAMP)
Venue: Landmark University, Omu Aran, Kwara State
Date: 6th–9th November, 2018
Presentation: Optimal Estimate of Hyperbolic Interface Problems on Quadratic Element

8 Workshop Attended

1. **Workshop:** Data Analytics with Python
Venue: Department of Computer Science and Mathematics, Mountain Top University, Nigeria
Date: 21st–25th March, 2022

9 Professional Activities

9.1 Membership of Editorial Board of Journals

- (i) SCIREA Journal of Mathematics

9.2 Reviewership

- (i) Mathematical Reviews (USA)
- (ii) International Journal of Applied and Computational Mathematics (Springer)
- (iii) [Applied and Computational Mathematics, Science Publishing Group](#)
- (iv) Journal of The Nigerian Mathematical Society

10 Association and Society

- Nigerian Mathematical Society
- Nigerian Association of Mathematical Physics

11 Scholarship & Awards

- Oyo State Scholarship for Post Graduate Students 2013
- Research visit to School of Mathematical Sciences, University Sains Malaysia, Malaysia.
13 December, 2019 – 11 January, 2020. (Fully sponsored)

12 Skill Set

- Application Softwares
 - Matlab
 - Python
 - Maple
 - FreeFEM++
 - L^AT_EX
 - Microsoft Office Packages
- Operating System Environments
 - Windows
 - Linux
- Language Skill
 - English
 - Yoruba