

CURRICULUM VITAE

1. BIODATA

- a. Name: **OLAIJU, OLUSEGUN ADEYEMI**
- b. Date & Place of Birth: 30/11/1969, Ilaro
- c. Gender: Male
- d. State of Origin: Ogun State
- e. Nationality: Nigerian
- f. Marital Status: Married
- g. Number & Ages of Children: Three/ 8,14,16
- h. Religion: Christianity
- i. Contact Address: 5A, Senior staff quarters F.P.I, Ilaro, Ogun State.
- j. Email Address: olusegun.olaiju@federalpolyilaro.edu.ng
- k. Telephone Number: 08032189536, 08130955389
- l. Present Position: Principal Lecturer
- m. Date of appointment/promotion: 20th Feb, 1998; 1st Jan, 2016

2. INSTITUTION ATTENDED WITH DATES

- a. Universiti Teknologi Malaysia 2017 – 2021
- b. University of Ibadan, oyo State, Nigeria 2008 – 2011
- c. University of Jos, Plateau State, Nigeria 1990 – 1995

3. ACADEMIC QUALIFICATIONS WITH DATES

- a. PhD(Computational Mathematics) 2021
- b. Master of Science (MSc), Mathematics 2011
- c. Bachelor of Science (BSc), Mathematics 1995
- d. Senior Secondary School Leaving Certificate (SSCE) 1997

4. MEMBERSHIP OF LEARNED SOCIETIES AND PROFESSIONAL BODIES

- a. Member, Society for industrial and applied mathematics
- b. Member, Canadian Mathematical Society
- c. Member, Nigeria Mathematical Society
- d. Member, Australia Mathematical Society

- e. Member, International Linear Algebra Society
- f. Member London Mathematical Society (LMS)
- g. Member Institute of mathematics & its applications (IMA)

5. WORKING EXPERIENCE

a. *Academic Experience*

Federal Polytechnic Ilaro, Ilaro, Ogun State, Nigeria 1997 – till date

Department of Mathematics and Statistics

Course Taught:

- a. Business Mathematics I II (MTH121) 1997 – till date
- b. Business Mathematics II (MTH 132) 1997 – till date
- c. Advanced Algebra (MTH 311) 1997 – till date
- d. Advanced Calculus (MTH 321) 1997 - 2018
- e. Logic & Linear Algebra (MTH 111) 1997 – till date
- f. Operations Research I (STA 314) 1997 – till date
- g. Operations Research II (STA 411) 1997 – till date
- h. Numerical Methods (MTH 321) 1997 – till date
- i. Calculus (STA 114) 1997 – till date

Federal University of Technology, Oye Ekiti, Ekiti, Nigeria

- a. Department of Computer Eng. (Adjunct Lecturer) 2020-till date

Course Taught:

- a. Numerical Computation I (CPE 311) 2022 – till date
- b. Numerical Computation II (CPE 312) 2022 – till date

b. *Research Interest:*

- i. Numerical Computation (NC)
- ii. Approximation theory (AT)
- iii. Probability theory (PT)

c. *Administrative experience*

- i. Member, Examination Committee (FPI) 2006 to 2017.
- ii. Chairman time-table Committee (FPI) 2022
- iii. Committee to consider technology enabled quality assurance 2023
- iv. Committee to automate the exam timetable, distribution and roster 2023

7. SERVICES OUTSIDE FEDERAL POLYTECHNIC, ILARO

- i. Reviewer, Academic Publications for International Research and Development Institute, Research and Development Network. 2013-to Date
- ii. Reviewer, British Journal of Mathematics & Computer science 2013-to Date

8. SCHOLARSHIP/FELLOWSHIP AND PRICES

- i. TetFund Scholarship beneficiary 2016-2021

9. ACADEMIC PUBLICATIONS

i. *Journal Publications:*

International Journals:

Olaiju, O. A., Akeremale, C. O., & Hoe, Y. S. (2020). Finite Element Method for Heat Transfer Phenomenon on a Closed Rectangular Plate. *EUREKA: Physics and Engineering*, 5, 91-100.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3752752

Akeremale, O. C., Olaiju, O. A. and Yeak, S. H. (2020). Generation of Shape Functions by Optimization. *Advances in Mathematics: Scientific Journal*, 9(11), 9429-9441.
<https://www.research-publication.com/amsj/uploads/papers/vol-09/iss-11/AMSJ-2020-N11-47.pdf>

Akeremale, O. C., Kuboye, J. O., Yeak, S. H., Abununyi, E. A. & Olaiju, O.A. (2020). Hybrid-Block Numerical Method For Solving Second Order Ordinary Differential Equations. *International Journal of Computational Analysis*.
<http://www.cuijca.com/ojs/index.php/ijca/article/viewFile/26/31>

Akeremale, O. C., Olotu, O., & Olaiju, O. A. (2019). Augmented Lagrangian Method for One Dimensional Optimal Control Problems Governed by Delay Differential Equation. *Advances in Mathematics and Computer Science* 2, 108-121.
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Augmented+Lagrangian+Method+for+One+Dimensional+Optimal+Control+Problems+Governed+by+Delay+Differential+Equation&btnG=

Akeremale, Collins O, Anthony, Faith & Olaiju, Segun (2019). Comparative Analysis of Initial Feasible Solutions to Balanced Transportation Problems. *Eng Technol Open Acc.*, 2019; 3(2).
<https://juniperpublishers.com/etoaj/pdf/ETOAJ.MS.ID.555607.pdf>

- Ogunbode, E. B., Egba, E. I., Olaiju, O. A., Johnson, C. N., Amusuk, D. J., & Dodo, Y. A. (2018). Determining the properties of green laterized concrete with fly ash for sustainable solid waste management. *Chemical Engineering Transactions*.
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Determining+the+properties+of+green+laterized+concrete+with+fly+ash+for+sustainable+solid+waste+management&btnG=
- Olaiju, O. A., Hoe, Y. S., Ogunbode, E. B., Fabi, J. K., & Egba, E. I. (2018). Achieving a sustainable environment using numerical method for the solution of advection equation in fluid dynamics. *Chemical Engineering Transactions*, 63, 631-636.
<https://www.cetjournal.it/index.php/cet/article/view/CET1863106>
- Olaiju, O. A., Hoe, Y. S., & Ogunbode, E. B. (2018). Finite Element and Finite Difference Numerical Simulation Comparison for Air Pollution Emission Control to attain Cleaner Environment. *Chemical Engineering Transactions*, 63, 679-684.
<https://www.cetjournal.it/index.php/cet/article/view/CET1863114>
- Olaiju, O. A., Are, S. O., & Ojuawo, O. (2018). Rohrer's Index Prediction Using Neural Network. *The Ilaro Journal of Management, Arts, Science and Technology (TIJMAST)*, 3(1).
<http://eprints.federalpolyilaro.edu.ng/515/1/Rohrer1%202018.pdf>
- Olaiju, O. A., Are, S. O., & Ojuawo, O. (2018). Probability of getting to N point in a game of two players. *The Ilaro Journal of Management Arts, Science and Technology (TIJMAST)*, 3(1).
<http://eprints.federalpolyilaro.edu.ng/516/1/Probability+of+getting+to+N+point+in+a+game+of+two+players%202018.pdf>
- Ogunbode, E. B., Egba, E. I., Olaiju, O. A., Elnafaty, A. S., & Kawuwa, S. A. (2017). Microstructure and Mechanical Properties of Green Concrete Composites containing Coir Fibre. *Chemical Engineering Transactions*, 61, 1879-1884.
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Microstructure+and+mechanical+properties+of+green+concrete+composites+containing+coir+fibre&btnG=
- Olaiju, O. A., Hoe, Y. S., & Ogunbode, E. B. (2017). Finite Difference Approximations to the Heat Equation via C. *Journal of Applied Sciences and Environmental Sustainability*, 3(7), 188-200.
<https://www.jases.org/current-issue/vol-3-issue-7-2017/finite-difference-approximations-to-the-heat-equation-via-c/>
- Olaiju, O.A , Are, S.O, Ezekiel, I.D, Afolayan, O (2015). Rational Model And Probability Of Infection. *The International Institute for Science, Technology and Education (IISTE) Journal of Mathematical Theory and Modelling Control Theory and Informatics*. 5 (2), 20-28.

<https://iiste.org/Journals/index.php/CTI/article/view/20062>

- Olaiju, O.A, Ojuawo, O.O, Afolayan, O, (2015). *Pattern Recognition Neural Network And Class Of Grades. The International Institute for Science, Technology and Education (IISTE)Journal of Mathematical Theory and Modeling, Network and Complex Systems* 5(2).
<https://www.iiste.org/Journals/index.php/NCS/article/view/19723>
- Olaiju, O.A, Ezekiel, I.D, Are, S.O, Taiwo, A.A. (2015). Steps Problem: The Link Between CombinatoricAnd K-Bonacci Sequences. *European Journal of Statistics and Probability*, 3(4). 10-19.
<https://www.eajournals.org/wp-content/uploads/Steps-Problem-The-Link-Between-Combinatoric-and-K-Bonacci-Sequences.pdf>
- Akinbo, R. Y, Ezekiel, I. D, Olaiju, O. A, Ezekiel, E. I (2013). The Newsboy Problem In Determining Optimal Quantity In Stochastic Inventory Problem For Fixed Demand. *Mathematical Theory and Modeling*, 3(13).
<https://core.ac.uk/download/pdf/234679443.pdf>
- Olaiju, O.A and Ezekiel, I.D (2012). The Newsboy Problem in Determining Optimal Quantity in Stochastic Inventory Problem for Fixed Demand. *The international institute for science, Technology and Education*, 3(13), 126-133.
<https://core.ac.uk/download/pdf/234679443.pdf>

Local Journals:

- Olaiju, O. A. & Alabi, N. O. (2022). Higher order finite element approximation in one dimension. *Ede journal of business*, 9(1).
- Olaiju, O. A., Agbolade, O. A. & Sikiru, O. A. (2022). Theoretical Derivation Of Shape Functions For Finite Element Method. *Ede journal of business*. 9(1).
- Olaiju, O.A and Aladelusi, K.B. (2012). Prediction of Body Mass Index using Artificial Neural Network. *International journal of Engineering and technical Mathematics*. 5(2).
- Olaiju, O.A. & Aladelusi K.B. (2012). Prediction of Grade Point Average using Artificial Neural Network. *African journal of physical science*, 5(2).
- Olaiju, O.A. & Aladelusi K.B. (2012). Prediction of Students Grades using Pattern Recognition Neural Network. *African journal of Educational research*.
- Olaiju, O.A. & Aladelusi K.B. (2012). The Mathematics behind the Financial Market. *International Journal of Advancement in Physical Science*.

Fagoyinbo. I.S. & Olaiju, O.A. (2008). The use of Statistical Quality Control to Assess the Quality of Products Manufactured Locally. *International Research and Development. Journal of Social and Policy Issues*.

ii. *Conference Papers:*

International Conference Papers:

Olaiju, O.A. (2020). Institute of Mathematics & Applications. A paper presented at *Black Heroes of Mathematics Virtual Conference*, Monday 26th -27th October 2020.

Olaiju. O.A. & Akeremale, O.C. (2020). Shape Function by Optimization. A paper presented at the *international conference on recent advances in applied mathematics* at Double Tree by Hilton Hotel Kuala Lumpur, Malaysia. 4th –6th February.

Olaiju O.A. (2017) Finite Element and Finite Difference Numerical Simulation Comparison for The Solution of One-Dimensional Boundary Value Problem. *3rd International Conference of Science, Engineering, and Social Sciences*, Universiti Teknologi Malaysia. May 17th -18th 2017.

Local Conference Papers:

Olaiju, O.A. & Alabi N.O. (2022). Derivation of an Unbiased Lincoln-Peterson Estimator of the Total Population in Tagging and Sporting Method for Small Sample Size. A paper presented at the *1st International conference of the business management administration and information science at the Federal Polytechnic Ede*, Osun state, Nigeria. 26th -28th July.

Olaiju, O.A. & Alabi N.O. (2022). Higher order finite element approximation in one dimension. A paper presented at the *13th national conference of the school of management studies, the Federal Polytechnic, Ilaro, Ogun State, Nigeria on technical and vocational education training (TVET) as a panacea to economic and security challenges in Nigeria*. 5th-6th September.

Olaiju O.A, Agbolade O.A & Sikiru O.A. (2022). Theoretical derivation of shape functions for finite element method. A paper presented at the *3rd International Conference on the revamping of the economy: the TVET perspectives*, at the Federal Polytechnic, Ilaro, Ogun state Nigeria. 16th & 17th August.

Olaiju O.A, Akanbi O.O. & Badru J.O. (2021). Finite element method in transient heat conduction problem. A paper presented at the *19th Annual National conference (virtual) of the school of business studies the Federal Polytechnic Ede*, Osun state, Nigeria. 12th -14th October.

- Olaiju, O.A. & Alabi N.O. (2020). Pattern in Quadratic Functions. A paper presented at the *18th Annual National Conference (Virtual) of The School of Business Studies the Federal Polytechnic Ede, Osun State, Nigeria.* 2nd -4th September.
- Olaiju, O.A & Ezekiel, I.D (2016). A mathematical modelling of the **probable** prize in the product box. A paper presented at the *5th National Conference at ASUP Hall, Federal Polytechnic Ilaro, Ogun State, Nigeria.* 17th -19th October.
- Olaiju, O.A & Ezekiel, I.D (2016). Optimal Policies for two stage product supply chain Management Inventory system using additive model. A paper presented at the *5th National conference at ASUP hall, Federal Polytechnic Ilaro, Ogun state, Nigeria.* 17th -19th October.
- Olaiju, O.A (2016). Modelling media reach and frequency. A paper presented at the *13th national conference of the academic staff union of polytechnics on diversification of the Nigerian economy amidst global economic crises held at the Kano State Polytechnic, Kano* from 7th -10th November.
- Olaiju, O.A. (2016). Probability of getting to N point in the game of two player. A paper presented at the *5th Annual National Conference (SIGTCO) on Technological Advancement and Its Influence on Third World Economies at The School of Information and Communication Technology, Auchu polytechnic Auchu, Nigeria.* 19th -22nd July.
- Olaiju, O.A., Are, S.O., Agbolade O.A. & Ezekiel I.D. (2015). Enhancing weather Information with Probability Forecasts. A paper presented at *3rd National conference annual conference on Science and Technology: The Catalyst for Political Stability And Economic Development of A Nation At The School of Applied Science, Federal Polytechnic Ilaro.* 15th-18th June.
- Olaiju, O.A., Are, S.O., Agbolade, O.A., Ezekiel, I.D. (2015). Random Guessers. A paper presented at *3rd National conference annual conference on Science and Technology: The catalyst for political stability and economic development of a nation at th school of applied Science, Federal Polytechnic Ilaro.* 15th-18th June.
- Olaiju O.A (2015). Using Heat Equation to Approximate Ruin Probability. A paper presented at the *School of management studies 2015 Ghana retreat on management imperatives in a globalized economy head at University of Ghana Legon, Accra, Ghana* between 30thSeptember and 3rd October.
- Olaiju O.A., Ezekiel, I.D, Are S.O, & Agbolade, O.A. (2015). The link between combinatorics and k-bonacci sequences. A paper presented at the *3rd National conference of the*

school of applied science, Federal polytechnic Ilaro, Ogun state, Nigeria. 15th - 18th June.

- Olaiju, O.A., Ezekiel I.D & Agbolade O.A (2015). Students' performance in Mathematics with special reference to secondary school education in Ogun state. A paper presented at the 3rd *National conference of the school of applied science*, Federal Polytechnic Ilaro, Ogun state, Nigeria. 15th -18th June.
- Olaiju, O.A. (2015). 34th *Nigeria Mathematical Society annual conference*, Department of Mathematics, University of Lagos, Nigeria.
- Olaiju, O.A., Are S.O, Agbolade O.A. (2013). Regression Analysis and Population Prediction. *Achieving the national Transformation agenda through scientific approach2nd National conference of school of applies science*, Federal Polytechnic Ilaro.
- Ezekiel, I.D., Olaiju, O.A, Ezekiel, E.I. (2013). Determination of Optimal Size of Casual Workers in a Production Company using Stochastic Model. *Achieving the national Transformation agenda through scientific approach2nd National conference of school of applies science*, Federal Polytechnic Ilaro.
- Ogunseye, T.O., Ezekiel, I.D., Olaiju, O.A., Are, S.O. (2013). Application of Probability to Banking Loan Workout. *Achieving the national Transformation agenda through scientific approach2nd National conference of school of applies science*, Federal Polytechnic Ilaro.
- Ezekiel, I.D., Olaiju, O.A., Ezekiel, E.I. (2013). Determination Of Optimal Size Of Casual Workers In A Production Company Using Stochastic Model. *Achieving the national Transformation Agenda through Scientific Approach 2nd National Conference of School of Applied Science*, Federal Polytechnic Ilaro.
- Ogunseye, T.O., Ezekiel, I.D., Olaiju, O.A, Are, S.O. (2013). Application Of Probability To Banking Loan Workout. *Achieving The National Transformation Agenda Through Scientific Approach 2nd National Conference of School of Applied Science*, Federal Polytechnic Ilaro.
- Aladelusi K.B, Taiwo A.A and Olaiju, O.A (2012). Challenges and Control of Computerised-Related Fraud in Nigeria Banking System and its Security Consequence. A paper presented at the 8th *National conference on sustainable development, school of management studies*, Federal polytechnic Ilaro, Ogun state, Nigeria. 21st -23rd November.
- Bako, Y.A., Taiwo, A.A., Olaiju, O.A. & Aladelusi, K.B. (2011). Developing Entrepreneurship Culture for Sustainability the Role of Entrepreneurship Education. A paper

Presented at the 4th National conference of Academic staff Union of Federal Polytechnic Ilaro. September 2011.

Olaiju, O.A, (2009). Modern Statistics, How and What to Teach. Presented at the 1st annual national conference of school of applied science on repositioning the Nigeria economy through scientific and technical innovations, Federal polytechnic Ilaro, Nigeria.26th -30th October.

iii. *Book Chapters/Book Publications*

Olaiju, O.A. (2022). *Logic and Linear Algebra*. Olas Print. ISBN: 978-978-794-986-3.

Olaiju O.A (2022). *Advanced Algebra*. Olas Print. ISBN: 978-978-794-985-6.

iv. *Other Project and Dissertation*

PhD. Multiscale Hybrid finite element and finite volume method for high gradient boundary value problem.

M.Sc. A Matrix-Analytic Approach to the N-Player Ruin Problem.

BSc. Derivation of One-step Gaussian Scheme by Collocation.

v. *Major Research Undertaken*

Automation of the Federal polytechnic Ilaro Lecture Time-table

10. SEMINARS AND WORKSHOPS ATTENDED

- i. Introduction to finite element analysis for Engineering applications' short course. A work shop organized by the postgraduate student society, school of mechanical engineering & school of biological engineering and health sciences (PGSS SKM-SKBSK) at the Universiti Teknologi Malaysia.22nd December 2019
- ii. NMC Capacity building workshop for Mathematics and Statistics Lecturers in Tertiary institutions held at the National mathematical centre, Kwali-Abuja, Nigeria. 21st -25th October

11. COMMUNITY SERVICE

- i. Member of Area community high school old student association 2001-to Date
- ii. Member, Front liner club Ilaro 2013-to Date
- iii. Member, NEXUS Group Ilaro. 2015-to-Date

12. EXTRA-CURRICULAR ACTIVITIES

Reading

13. REFEREES

- a. Prof Dr Yeak, Su Hoe
Universiti Teknologi Malaysia
Department of Mathematics
s.h.yeak@utm.my
+060 012-7116604
- b. Akinbo, R.Y.,
Mathematics and Statistics Department,
Federal Polytechnic Ilaro, Ogun State
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