

CURRICULUM VITAE

Personal Information:

Name: **Olabode Matthias BAMIGBOLA**
Permanent Address: Department of Mathematics, University of Ilorin, Ilorin 240003, Nigeria.
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Education:

University of Ilorin:

Doctor of Philosophy in Mathematics, 1989
Master of Science in Mathematics, 1984
Bachelor of Science Education (Mathematics) 1982

Positions at University of Ilorin:

Senate member, 2003-present
Head of department, 2005-2008
Professor, 1999-present
Associate Professor, 1995-1999
Senior Lecturer, 1993-1995
Lecturer, 1986-1993
Part-time Lecturer, 1986-2003

Visiting Positions:

Visiting Professor, Department of Pure and Applied Mathematics, Ladoke Akintola University of Technology, Ogbomoso, Nigeria, 2010-2011.
Visiting Associate Professor, Department of Computer Science and Engineering, Ladoke Akintola University of Technology, Ogbomoso, Nigeria, 2001.
Visiting Lecturer, Department of Mathematics, Statistics & Computer Science, Federal University of Technology, Minna, Nigeria, 1993-1994.
Adjunct Lecturer, Department of Mathematics/Computer Science, Babcock University, Ilishan-Remo, Nigeria, 2004-2007.
Associate Lecturer, Department of Computer Science and Engineering Ladoke Akintola University of Technology, Ogbomoso, Nigeria, 1998-2000, 2002-2007.

Courses Taught:

Undergraduate level:

Calculus, vectors & tensors, Coordinate geometry, Elementary differential equations, Functional analysis, Linear algebra, Linear programming, Mathematical methods, Mathematical modeling, Metric space topology, Modelling and simulation, Numerical analysis, Operations research, Optimization theory, Ordinary differential equations, Partial differential equations, Performance evaluation, Real analysis, Riemann-Stieljes integration, Sets and logic, System analysis and design.

Postgraduate level:

Advanced operations research, Asymptotic methods, Classical analysis, Computational optimization, Computational optimization and numerical analysis, Finite element method and mathematical methods, Mathematical methods, Numerical analysis and computation, Numerical methods, Numerical optimization in engineering, Operations research, Operations research and mathematical methods, Optimization.

Honours and Awards:

EMS-Simons for Africa Grant for Collaborative Research visit 2018.
Academic director, Collaborative Research in Industrial Mathematics, Simons Foundation African Mathematics Project 2017.
Contact person, IMU-CDC Volunteer Lecturer Program, University of Ilorin, 2016.
Visiting Researcher, School of Computational and Applied Mathematics, University of Witwatersrand, Johannesburg, South Africa 2012-2015.
Visiting Researcher, School of Mathematics, Statistics and Computer Science, University of Kwa-Zulu Natal, South Africa 2015.
Leader, University of Ilorin Research Group on development and application of optimization 2014-present.
Honorary referee 2013 Maejo International Journal of Science and Technology.
Visiting Researcher, Department of Electrical Engineering, University of Cape Town, South Africa 2013.
Research Award, African Mathematics Millennium Initiatives 2009.
Grant for Teaching and Research Mentoring, African Mathematics Millennium Initiatives Project 2008.

Fellow, Mathematical Association of Nigeria (FMAN), 2006.
Fellow, Academy of Control, 1999.
Research Scientist, National Mathematical Centre, Abuja, Nigeria 1997.
Senate Research Grants for individual research, University of Ilorin, 1986–1999.

Research Interests:

Optimization of electric power systems, financial systems, bio systems. Nonlinear conjugate gradient and trust region methods for large-scale mathematical programming models. Convergence criterion for Gauss-Seidel iteration, application to linear and nonlinear algebraic systems of equations.

Publications:*Chapter in Book:*

Global Control Theory and Its Applications, Control Theory: Perspectives, Applications and Developments, Francisco Miranda (Ed.) (with T.A. Adewale), Nova Science Publishers (2015).

Journal Articles:

1. Parameter estimation and sensitivity analysis of an optimal control model for capital asset mana-

- gement (with T. Latunde), *Advances in Fuzzy Systems* 2018, 1-11 (2018).
2. Optimal hybrid BFGS-CG method for unconstrained optimization (with O.O. Okundalaye and C.N. Ejieji), *Asian Research Journal of Mathematics* 9 (1), 1-18 (2018).
 3. Optimal control of air pollution (with Y.O. Aderinto), *Punjab University Journal of Mathematics* 49(1), 139-148 (2017).
 4. Sensitivity of parameters in an optimal control model of the electric power generating system (with T. Latunde and Y.O. Aderinto), *Ilorin Journal of Computer Science and Information Technology* 1(1), 54-69 (2016).
 5. Numerical experiments of the conjugate gradient method with and without line search (with A. Ajimoti), *International Journal of Applied Science and Mathematical Theory* 2(1), 1-18 (2016).
 6. Uncertain optimal control model for management of net risky capital asset (with T. Latunde), *IOSR Journal of Mathematics* 12(3), 2–30 (2016).
 7. On the stability analysis of uncertain optimal control model for management of net risky capital asset (with T. Latunde), *International Journal of Applied Sciences and Mathematical Theory* 2 (1), 29-36 (2016).
 8. Optimal control applied to electric power generating systems model (with Y.O. Aderinto), *Ilorin Journal of Science* 2(1), 190-212 (2015).
 9. Mathematical modeling of electric power flow and the minimization of power losses on transmission lines (with M.M. Ali and M.O. Oke), *Applied Mathematics and Computation* 241, 214–221 (2014).
 10. On Algebraic Structure of Improved Gauss-Seidel Iteration (with A.A. Ibrahim), *International Journal of Mathematical, Computational, Physical and Quantum International Journal of Mathematical, Computational, Physical and Quantum Engineering* 8(10), 1161-1166 (2014).
 11. A Diagnostic Treatment of Unconstrained Optimization Problems via a Modified Armijo line search technique (with A.O. Adewumi, O.J. Adeleke and M.C. Agarana), *IOSR Journal of Mathematics* 10(6), 47-53 (2014).
 12. Predictive Models of Current, Voltage, and Power Losses on Electric Transmission Lines (with M.M. Ali and K.O. Awodele), *Journal of Applied Mathematics* 2014, 1-5 (2014).
 13. Pulse Vaccination Strategy in a SVEIRS Epidemic Model with Two-Time Delay and Saturated Incidence (with G. Bolarin), *Universal Journal of Applied Mathematics* 2(5), 22 –232 (2014).
 14. On controllability property of optimal control model of electric power generating system (with Y.O. Aderinto), *Journal of Science, Technology and Mathematics Education* 10(2), 92–99 (2014).
 15. Construction of polynomial basis and its application to ordinary differential equations (with T. Aliu), *Nigerian Journal of Mathematics and Applications* 23, 1-13 (2014).
 16. A New Dogleg Method for Solving the Trust-Region Subproblem (with B.I. Oruh), *IOSR Journal of Mathematics* 8(2), 41-48 (2013).
 17. On optimum dispatch of electric power generation via numerical method (with Y.O. Aderinto), *African Journal of Science and Engineering* 12(2), 55-64 (2013).
 18. Resolution of extremisation problem using duality principle (with I.A. Osinuga), *Journal of Natural Sciences Engineering and Technology* 8(1), 16-24 (2013).
 19. Considering the depth of recursion in complexity measurement of algorithms (with

- A.E. Okeyinka), World Academy of Science, Engineering and Technology 61, 2157-2162 (2012).
20. A qualitative study of the optimal control model for an electric power generating system (with Y.O. Aderinto), Journal of Energy in Southern Africa 23(2), 65-72 (2012).
 21. Numerical study of depth recursion in complexity measurement using Halstead measure (with A.E. Okeyinka), International Journal of Applied Science and Technology 2(6), 106-111 (2012).
 22. A new conjugate gradient method for solving nonlinear unconstrained optimization problems (with E. Nwaeze), International Journal of Advanced Engineering Sciences and Technologies 2(2), 189–195 (2011).
 23. On efficiency of sequence alignment algorithms (with T.O. Oladele and C.O. Bewaji), African Scientist 10(1), 9-14 (2009).
 24. On the characterization of optimal control model of electric power generating systems (with Y.O. Aderinto), International Journal of Research in Physical Sciences 5(1), 59–70, (2009).
 25. Higher order trust region method (with B.I. Oruh), Nigerian Journal of Math. & Appl. 19, 15-32 (2009).
 26. A new criterion for choosing the trust region radius (with B.I. Oruh and T.A. Adewale), Nigerian Journal of Math. & Appl. 19, 88-99 (2009).
 27. Existence and uniqueness for optimal control of oxygen absorption in aquatic system (with F.B. Agosto), Electronic Journal of Applied Sciences 10, 9-18 (2008).
 28. Concept of Strings and Trees in Bioinformatics (with T.O. Oladele and J.A. Gbadeyan), *ABACUS*, 35(2), 56–67, (2008).
 29. Optimal control for bacterial transport (with F.B. Agosto), African Journal of Science and Technology, Science and Engineering 8(2), 18-23 (2007).
 30. On the minimum norm solution to Weber problem (with I.A. Osinuga), African Journal of Educational Studies in Mathematics and Sciences 5, 29-34 (2007).
 31. Numerical treatment of the mathematical models for water pollution (with F.B. Agosto), Journal of Mathematics and Statistics 3(4), 172-180 (2007).
 32. Optimization abstraction in R-Multipliers (with S.O. Makanjuola and J.F. Adelodun), Journal of Institute of Maths & Comp. Science (Maths Series) 19(2), 177-181 (2006).
 33. A conjugate gradient method for discrete optimal control problems (with C.N. Ejieji), *ABACUS* 33(2B), 318-329 (2006).
 34. The attraction and challenges of software componetization: An experience of Autobudget (with J.O. Daramola), Journal of Computer Science & its Applications 12(1), 17–27 (2006).
 35. A higher-order conjugate gradient method for non-linear programming (with C.N. Ejieji), *ABACUS* 33(2B), 394-405 (2006).
 36. Research and Administration 1, 25-33 (2005). Promoting quality assurance in software products through Dynamic System Development Method (with J.O. Daramola), Journal of Computer Science and its Applications 11(1), 81-94 (2005).
 37. A penalty method for programming constrained problems (with O.L. Ogundele), *ABACUS* 32(2B), 241-248 (2005).
 38. Optimization in R^n by Coggin's method (with F.B. Agosto), International Journal of Computer

- Mathematics 81(9), 1145–1152 (2004).
39. An object-oriented software model for students' registration and examination result processing in Nigerian tertiary institutions (with O.O. Olugbara and J.O. Daramola), *Science Focus* 6, 70–80 (2004).
 40. Object algebra: Mathematical formalism for types and classes (with J.O. Daramola), *Nigerian Journal of Pure & Applied Sciences* 9, 17-22 (2004).
 41. A mathematical physics models for enhancing the productivity of the cotton weaving industry (with S.O. Adeyemo and K. Rauf), *Journal of the Nigerian Association of Mathematical Physics* 8, 289–292 (2004).
 42. On global optimization for convex problems on abstract spaces (with I.O. Osinuga), *ABACUS* 31(2A), 94-98 (2004).
 43. On existence and uniqueness of solution to constrained Navier-Stokes Observatory optimal control problems (with F.B. Agosto), *Nig. Journal of Mathematics & Applications* 16(1), 91–96 (2003).
 44. A power series method for solving nonlinear two-point boundary value differential equations by conversion to initial value problem, *ABACUS* 30(2A), 81–87 (2003).
 45. Generalised Chebyshev basis functions (with M.A. Ibiejugba, R. Odekunle and D.J. Evans), *International Journal of Computer Mathematics* 72(1), 115-129 (1999).
 46. On complexity measurement of combinatorial algorithms (with A.E. Okeyinka), *Nigerian Journal of Mathematics & Applications* 12, 46–62 (1999).
 47. A new heuristics for the traveling salesman's problem (with A.E. Okeyinka), *Int. Jour. of Mathematical Sciences* 1, 62-68 (1999)..
 48. A Fibonacci search technique for a class of multivariable functions (with M.A. Ibiejugba and E.O. Agyingi), *Int. Jour. of Mathematical Sciences* 1, 25-34 (1999).
 49. Chebyshev finite element method for non-linear differential equations (with M.A. Ibiejugba and D.J. Evans), *International Journal of Computer Mathematics* 63, 309–320 (1997).
 50. Analysis of Chebyshev finite element method for nonlinear differential equations (with M.A. Ibiejugba and D.J. Evans), *International journal of computer mathematics* 65(3-4), 309-320 (1997).
 51. A homogeneous distributor on finite dimensional spaces and some of its applications, *Nigerian Journal of Pure & Applied Sciences* 12, 511–517 (1997).
 52. A variationally based penalty method for solving parabolic control problems – one dimensional case, *Nigerian Journal of Mathematics & Application* 10, 120–132 (1997).
 53. Optimal Chebyshev finite element method for ordinary differential equations (with M.A. Ibiejugba, R. Odekunle and D.J. Evans), *ABACUS* 25(2), 392–407 (1997).
 54. A comparison of the computational efficiency of some polynomial basis functions in the finite element method, *ABACUS* 24(2), 253-364 (1996).
 55. Analysis of Chebyshev finite element method for linear differential equations using equal interval elements (with M.A. Ibiejugba and D.J. Evans), *International Journal of Computer Mathematics* 62, 113–130 (1996).
 56. A transform method for first order initial value problems, *ABACUS* 24(2), 265–275 (1996).
 57. Constrained optimization with pattern searches (with M.A. Ibiejugba and B.I. Oruh), *Nigerian Journal of Mathematics & Applications* 8(2), 71-88 (1995).

58. Optimal barrier function method (with M.A. Ibiejugba and B.I. Oruh), *Nigerian Journal of Mathematics & Applications* 8(1), 160–175 (1995).
59. Generalized basis of finite order (with E.F. Adebisi), *Computer Metrics* 1, 73-86 (1993).
60. Finite element product approximations to two-point nonlinear boundary value problems (with I.O. Adeshina), *Nigerian Journal of Mathematics & Applications* 16, 68-78 (1993).
61. Error estimates in the finite element method for differential equations, *Computer Metrics* 1, 51–66 (1993).
62. A Galerkin weighted residual finite element method for linear differential equations (with M.A. Ibiejugba), *Journal of Nigerian Mathematical Society* 11(3), 149–156 (1992).
63. A quasi Newton method for minimizing factorable functions (with M.A. Ibiejugba and T.A. Adewale), *Afrika Matematika* 2(4), 19–36 (1991).
64. Higher order Chebyshev basis functions for two-point boundary value problems (with M.A. Ibiejugba and P. Onumanyi), *International Journal for Numerical Methods in Engineering* 26, 327-313 (1988).
65. A Chebyshev finite element Method for solving differential equation (with M.A. Ibiejugba and P. Onumanyi), *Nigerian Journal of Pure & Applied Science* 2, 70–85 (1987).

Conference Proceedings:

66. A quantitative study of the optimal control model for an electric power generating system (with Y.O.) *Proceedings of IEEE AFRICON 2013*, 1-4 (2013).
67. An efficient and convergent method for unconstrained nonlinear optimization (with M.M. Ali and E. Nwaeze), *Proceedings of the International Congress of Mathematicians, Hyderabad, India* (2010).
68. A modified conjugate gradient method for optimizing non–quadratic functionals (with E. Nwaeze), *Proceedings of the International Conference on New Trends in Mathematical and Computer Sciences with Applications to Real World Problems*, 505-521(2006).
69. Outsourcing of software components – opportunities for developing countries (with J.O. Daramola), *Proceedings of the 8th International Conference of the Nigeria Computer Society* 16, 42-48 (2005).
70. On existence and uniqueness of solution to the thermal filtration model (with F.B. Agosto), *Proceedings of the 4th International Workshop on Contemporary Problems in Mathematical Physics*, 333–336 (2005).
71. On explicit specification of software components with DB-DATA ENKRYTA (with J.O. Daramola), *Proceedings of the 8th International Conference of the Nigeria Computer Society* 16, 40–145 (2005).
72. Outsourcing of software components – opportunities for developing countries (with J.O. Daramola), *Proceedings of the 8th International Conference of the Nigeria Computer Society*, 16, 42- 48 (2005).
73. An integrated framework for web-based learning (with J.O. Daramola), *Proceedings of International Conference on Application of Inf. & Comm. Tech. to Teaching, Research and Administration*, 1, 25–33 (2005).
74. An integrated framework for web-based learning (with J.O. Daramola), *Proceedings of the International Conference on Application of Inf. & Comm. Tech. to Teaching, Research and Administration*, 1, 25–33 (2005).

75. Optimal Control for filtration (with F.B. Augusto and O.P. Layeni), Proceedings of the Third International Workshop on Contemporary Problems in Mathematical Physics, 170–174 (2004).
76. Optimal control of oxygen depletion in an aquatic system. Research Journal of Applied Sciences I(1-4), 63-66 (2006).

Conferences and Workshops:

- Workshop on Nonlinear Differential Equations, Dynamical Systems and Applications, University of Kansas, Lawrence, USA, 20-21 October, 2018.
- Nigerian Mathematics in Industry Study Group Workshop/Conference, Covenant University, Ota, Nigeria, 24 -26 September, 2018.
- 5th International Workshop & Conference on Mathematical Analysis and Optimization: Theory and Applications, University of Lagos, Lagos, Nigeria, 11–17 March, 2018.
- Nigerian Mathematics in Industry Study Group Workshop/Conference, Covenant University, Ota, Nigeria, 10 -16 July, 2016.
- 35th Annual Conference of Nigerian Mathematical Society, Federal University of Technology, Minna, Nigeria, 2-6 May, 2016.
- 2nd International Workshop on Mathematical Analysis and Optimization: Theory and Applications, University of Lagos, Lagos, Nigeria, 16-21 March, 2015.
- International Conference on Applied Mathematics and Numerical Analysis, Dubai, UAE, 18-19 October, 2014.
- 51st Annual Conference of Mathematical Association of Nigeria, University of Ilorin, Ilorin, Nigeria, 31 August– 5 September, 2014.
- 1st International Conference on Mathematical Analysis and Optimization : Theory and Applications, University of Lagos, Lagos, Nigeria, 12-14 March, 2014.
- 10th International Conference on Power System Operation and Planning, Abuja, Nigeria, 11–13 November, 2013.
- 8th Pan African Congress of Mathematicians, National Mathematical Centre, Abuja, Nigeria, 30 June-7 July, 2013.
- International Congress of Mathematicians (ICM), Hyderabad, India, August, 2010.
- 28th Annual Conference of Nigerian Mathematical Society, Ilorin, Nigeria, June 2009.
- International Workshop on Stochastic and Applied Global Optimization, Skukuza, South Africa, July 2008.
- 26th Annual Conference of Nigerian Mathematical Society, Akure, Nigeria, April 2007.
- International Conference on New Trends in Mathematical and Computer Sciences, Covenant University, Ota, Nigeria, June 2006.
- Fourth International Workshop on Contemporary Problems in Mathematical Physics, Cotonou, Republic of Benin, 5 November, 2005.
- 8th International Conference of the Nigeria Computer Society, Port Harcourt, Nigeria, June 2005.
- 24th Annual Conference of the Nigerian Mathematical Society, Ago-Iwoye, Nigeria, April 2005.
- International Conference on Application of Information & Communication Technologies to Teaching, Research and Administration, Ile-Ife, Nigeria, March 2005.
- 3rd International Conference on Mathematical and Computer Sciences, Lagos, Nigeria, February 2005. African Mathematical Union International Conference of Mathematical Scientists,

Abeokuta, Nigeria, November 2003.
Third International Workshop on Contemporary Problems in Mathematical Physics, Cotonou, Republic of Benin, Nigeria, November 2003.
22nd Annual Conference of Nigerian Mathematical Society, Ogbomoso, Nigeria, June 2003.
21st Annual Conference of the Nigerian Mathematical Society, Yola, Nigeria, April 2002.
Conference on Computational Mathematics & Applications, Abuja, Nigeria, September 2001.
35th Annual Conference of Mathematical Association of Nigeria, Jos, Nigeria, September 1998.
First Annual Prof. R.F.A. Abiodun Memorial Lecture, Abeokuta, Nigeria, May 1998.
Third Annual Conference of Centre for Research and Development, Ado – Ekiti, Nigeria, October 1997.
34th Annual Conference of Mathematical Association of Nigeria, Abuja, Nigeria, September 1997.
33rd Annual Conference of Mathematical Association of Nigeria, Ilorin, Nigeria, September 1996.
31st Annual Conference of Mathematical Association of Nigeria, Uyo, Nigeria, April 1994.
Fourth International Conference on Computational Mathematics, University of Benin, Benin-City, Nigeria, February 1990.
Ninth Annual Conference of Nigerian Mathematical Society, Minna, Nigeria, May 1998.
Third International Conference on Computational Mathematics, University of Benin, Benin-City, Nigeria, 25 – 29 January, 1988.
International Conference on Mathematics and its Applications, Ahmadu Bello University, Zaria, Nigeria, 1 – 8 March, 1987.
Second Pan-African Congress of Mathematicians, University of Jos, Jos, Nigeria, 23 -29 March 1986.

Invited Talk/Presentations:

Nigerian Mathematics in Industry Study Group Workshop/Conference, Covenant University, October 2016.
Nigerian Mathematics in Industry Study Group Workshop/Conference, Covenant University, July 2016.
School of Mathematics, Statistics and Computer Science, College of Agriculture, Engineering and Science, University Of Kwazulu-Natal, Durban, South Africa on 13th October, 2015.
Second ICAPTA Workshop on Mathematical Analysis and Optimization : Theory And Applications, University of Lagos, Nigeria, March 2015.
A diagnosis of the Secondary Education in Nigeria – an inaugural lecture of OGSSOBA, GSS, Omu-Aran, Nigeria, 18 October, 2004.

Research Supervision:*Doctoral theses:*

Tolulope Latunde, Optimal control of capital asset management model based on uncertainty theory, 2017.
Josiah G. Kitgakka, Gauss-Seidel based method for solving singular linear systems of algebraic equations, 2017.
Adams Ajimoti, New step-size formulae for conjugate gradient methods and their global convergence, 2016.
Tajudeen O. Aliu, Construction of polynomial bases and their application to differential equations,

- 2016.
- Gbolahan Bolarin, Development of mathematical models for the control and eradication of measles, 2013.
- Adebisi A. Ibrahim, Characterisation and application of stationary iterative methods, 2013.
- Michael O. Oke, Minimization of power losses over electric power transmission lines, 2012.
- Yidiat O. Aderinto, An optimal control model of the electric power generating system, 2011.
- Aderemi E. Okeyinka, A modification of the Halstead complexity measure, 2010.
- Ben I. Oruh, Higher-order trust region method for nonlinear optimization, 2009.
- Folashade B. Augusto, Optimal control of oxygen demand in aquatic system, 2008.
- Emmanuel Nwaeze, A higher-order conjugate gradient method for solving nonlinear programming problems, 2007.
- Idowu A. Osinuga, Global optimization on Banach spaces, 2007.
- Catherine N. Ejieji, A modification of the conjugate gradient method for optimizing non-quadratic functionals, 2005.
- Joseph F. Adelodun, Optimization in R multiplier, 2002.

Masters Dissertations:

- Michael O. Ayansiji, Comparison of parameters of classical conjugate gradient methods using some inexact line searches, 2017.
- Ibukun I. Aina, Determination of coefficient of sufficient descent condition by variants of Hestenes-Stiefel conjugate gradient method, 2017.
- Wasiu A. Aderoju, Experiments with inexact line searches on high-order conjugate gradient method for large-scale optimization problems, 2015.
- Olufemi A. Fowosire, Prediction and control of avian influenza, 2015.
- John O. Lawal, On improved Gauss Seidel method, 2015.
- Oluwaseun O. Okundalaye, Modified hybrid Broyden-Fletcher-Goldfarb-Shanno conjugate gradient method for unconstrained optimization problems, 2015.
- John David, Row-sum convergence criterion for Gauss-Seidel iteration, 2014.
- Emmanuel O. Gbamila, Constrained optimization using Karush-Kuhn-Tucker conditions, 2014.
- Shuaib T. Nuhu, Updating least squares solution to overdetermined linear algebraic systems, 2014.
- Tanimowo O. Aliu, Mathematical model for prediction of electric power losses on transmission lines, 2013.
- Segun O. Egbekunle, Solution of consistent linear singular algebraic systems by decomposition methods, 2013.
- Tolulope Latunde, Parameters sensitivity in optimal control model of electric power generating system, 2013.
- Adam Ajimoti, A conjugate gradient method for minimizing large-scale unconstrained nonlinear optimization problems, 2012.
- Olawale J. Adeleke, A computational experiment with nonlinear conjugate gradient methods using inexact line search, 2011.
- Omolola F. Ajayi, Numerical solution of large-scale nonlinear unconstrained optimization problems by steepest descent method using exact line search, 2011.
- Deborah B. Alao, A conjugate gradient method for programming initial value continuous optimal control problems, 2009.

- Timothy O. Okerinde, E-solution to global system for mobile communication network congestion and service limitation, 2009.
- Okoi E. Ibiang, Development and integration of copy security into a computer system, 2008
- Adebisi A.Ibrahim, On new convergence criteria for Gauss-Seidel iteration, 2008.
- Rafiu R. Adekunle, Implementation of a visual tool for database security using data encryption and data compression algorithm, 2006.
- Tinuke O. Dipe, Suffix tress and pattern matching with respect to proteins and deoxyribonucleic acid (DNA) sequence analysis, 2004.
- Michael O. Oke, Economization of truncated power series solution for nonlinear boundary value problems, 2004.
- Olaifa L. Ogundele, A penalty method for programming optimal control problems, 2003.
- Justus O. Daramola, Application of RAD tools to software packaging, 2003.
- Samuel O. Adeyemo, A mathematical physics model on Production factors for quality fabrics, 2002.
- Folashade B. Augusto, Multivariable Coggin's method, 2002.
- S.O. AbdulMalik, Integrated method for solving nonlinear two-point boundary value problems, 2002.
- Safiu A. Rafiu, Variationally-based penalty method for optimal control problems, 2000.
- Ben I. Oruh, Pattern search for minimizing constrained problems, 1996.
- Ephraim O. Agyingi, A Fibonacci search technique for a class of multivariable functions, 1996.
- Isaac O. Adeshina, Finite element product approximations to differential equations, 1994.

Undergraduate projects:

Over 100 projects supervised in the following areas: functional analysis, optimization, modelling and simulation, operations research, computer science, linear algebra.

Professional Affiliation:

- Mathematical Association of Nigeria, 1986-present
- Nigerian Mathematical Society, 1988-present
- Nigeria Computer Society, 2003-present
- African Mathematical Union, 1991-present
- International Mathematical Union, 2010-present
- American Mathematical Society (Affiliate member) 2009
- Society for Industrial and Applied Mathematics 2013

Membership of Editorial Boards, Reviewer and Assessor:

- Editorial Board of Nigerian Journal of Mathematics & Applications, 2013–present.
- Editorial Secretary of *Computer Metric* - Journal of the Centre for Advancement in Studies, Ilorin, Nigeria, 1996 - 1998.
- Reviewer of Conference papers, IEEE AFRICON 2013.
- Reviewer, Maejo International Journal of Science and Technology, 2013.
- Reviewer, Journal of Nigerian Mathematical Society, 2008 – 2013.
- Reviewer, Research Journal of Science, University of Maiduguri, Nigeria, 2008 – 2013.
- Reviewer, ABACUS, Journal of the Mathematical Association of Nigeria, 2005–2016.
- Reviewer, Spectrum Journal, Kaduna Polytechnic, Nigeria, 1995–1997.

External Assessor of Papers for Promotion/Appointment to Professorial cadres, 2005 – date.
External examiner of Theses and Dissertations (2005 – date).
External Examiner of Academic Programmes in Nigerian tertiary institutions (2000 – date).
National Universities Commission’s Accreditation Panels to some Nigerian Universities,
2005-present.

Service Activities:*University of Ilorin:*

Member of Senate 2003-present.
Head, Department of Mathematics, 2005 – 2008.
Representative on University and Faculty Adhoc Committees, 2003–present.
Coordinator, IMU-CDC Volunteer Lecturer Program, 2016-present.
Recipient, AMMSI grant for teaching and research mentoring in Mathematics, 2008.
Coordinator of departmental programmes, 1988-1991, 1997–2003, 2003–2005.
Curricular development and review committees, 1991-present.

Community Service:

Planning Committee, Crawford University, Faith City, Igbesa, Nigeria, 2003–2005.
Board of Governors of Apostolic Faith Secondary School, Egosi, 2005-2007.
Visitation Panel to Crawford University, Faith City, Igbesa, Nigeria, 2013.
Educational Consultant, Hope Rising Publishing Company, Ibadan, 2003.
Consultant, Sky Hope Engineering Limited, Zaria, 1996–2000.
Consultant, Optimization Manpower Workshop, Nigerian Paper Mill, Jebba, 1992.

Referees:

- Prof. Montaz Ali
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