

Resume

PERSONAL INFORMATION

Last Name: AYWA
First Name: SHEM OMUKUNDA
Date of Birth: 15th December, 1962
Gender: Male
Telephone (Office):
Mobile phone: 0721204913
Electronic Address: shemaywa2014@gmail.com
saywa@kibabiiuniversity.ac.ke
Mail Address: Mathematics Department,
Kibabii University, P.O. Box 1699, BUNGOMA – 50200

Teaching Experience:

1987-1988 Teacher, Bunyore Girls High School
1990 – 1991 Assistant Lecturer, Maseno University
1991 – 2000 Lecturer, Maseno University
2000 – 2003 Senior Lecturer, Maseno University
2003 – 2005 Senior Lecturer, Masinde Muliro University of Science & Technology
2005 Associate Professor, Kabarak University
2005 – 2013 Associate Professor, Masinde Muliro University of Science & Technology
2013 – 2015 Associate Professor, Kibabii University
College 2015 – PRESENT Professor of Mathematics, Kibabii

University Academic Qualifications

1984 – 1987 B.Ed (Double Mathematics), Kenyatta University
1988 – 1990 M.Sc (Pure Mathematics), Kenyatta University
1996 – 1999 Ph.D. (Functional Analysis), Potchefstroom University, S.A

Administrative Experience

1990--2003 Coordinator Mathematics Laboratory, Maseno University

2003 – 2006	Chairman, Mathematics Department, MMUST
2003 – 2013	Member, MMUST Strategic Plan Committee (IDEC)
2006 – 2008	Dean, Faculty of Science and Engineering, MMUST
2006 – 2013	Member, MMUST Tender Committee
2007--2013	Member, Management Board MMUST FM Radio Station
2008 – 2013 MMUST	Chairman, Faculty of Science Strategic Plan Committee, MMUST
2008—2013	Member, Faculty of Science Research and Scholarship Committee, MMUST
2013 – 2013	Member, Automated MMUST Library Management System
2011 – 2013	Chairman, MMUST Mathematics Department
2007 – 2013	Chairman, Steering Committee MMUST Eburnangwe Campus
2009 – 2013	Chairman, Steering Committee for MMUST Kaimosi Center
2009 – 2013	Chairman, Steering Committee for MMUST Mt. Elgon Center
2013 – 2015	Deputy Principal (Planning, Administration & Finance) Kibabii University College
2013 – 2019	Chairman, Board of Trustees, Kibabii University Staff Pension Scheme
2013 – 2019	Chairman, Joint Kibabii University/Local Community
Committee 2014 – 2019	Chairman, Kibabii University Master Plan Committee
2014 – 2019	Chairman, Kibabii University Strategic Plan Committee
2014 – 2019	Management Representative on ISO 9001:2008 Certification Committee
2015 – 2016	Ag. Deputy Vice Chancellor (PAF), Kibabii University
2016—2019 University	DVC Planning, Adminstration and Finance Kibabii University

Community Service

2000 –2003	Member BoG Ebukanga Secondary School
2007 – 2011	Member, PTA Moi Girls High School
2010 – 2019	Member, BoG, Ebbayi Secondary School
2011 – 2015	Chairman, BoG, Matende Girls Secondary School
2014 - 2018	PTA Member, Utumishi Boys Academy
2015 – 2018	Member BoM Butere Boys High School

Professional Societies

Member of MACKNET, Kenya

Member of South African Mathematical Society

Other Academic Activities

1. Editor J-STEM Academic Journal Society
2. External Examiner in Pure Mathematics at Kabarak University 2002 – 2005
3. External Examiner in Pure Mathematics at Jomo Kenyatta University of Agriculture and Technology, 2007 – 2012
4. Editor Journal of Disaster Management and Humanitarian Assistance
5. External Examiner in Pure Mathematics at Nairobi University, 2018-2023
6. NRF Reviewer 2018 to Date

PUBLICATIONS

1. Muchanga, R. N., Chikamai, L. & Aywa, S. (2025). Conjugacy Class Determination of the Split Extension Group $2^8:A_{10}$ Using Coset Analysis Techniques. IRE Journals. Vol. 9 (1)
2. Mulongo, P.W., Aywa, S., & Sirengo, J. (2024). Equivalent Characterizations of Isometrically Bounded Operators with Circular Numerical Ranges. IRE Journal. Vol. 8 (1).
3. Barasa, J., Chikamai, L. & Aywa, S. (2024). Circulatory and Polygonal Structure of Numerical Ranges for Non-Negative Matrices. IRE Journal. Vol. 8 (2).
4. Khadioli, R., Chikamai, L. & Aywa, S. (2024). Conjugacy Classes of the Group $2^7:G_2(2)$. IRE Journal. Vol. 8 (2).
5. Mulongo, P. W., Aywa, S., & Mukudi, F. (2024). Isometrically Isomorphic Banach Spaces: Classification, Properties, and Open Problems.
6. Barasa, J. S., Chikamai, L., & Aywa, S. (2024). Circularity Of Numerical Ranges for Isometrically Bounded Operators.
7. Satia, W. Arnest., Vincent, M., & Aywa, S. (2024). NonStandard Analysis of the Koch Snowflake Fractal Curve: Insights into Self-Similarity and Scaling Properties. IRE Journal. Vol. 8 (2).
8. Otanga OL, MO Oduor, SO Aywa. Partition of Measurable Sets. Journal of Advances in Mathematics. 2015a. 2022;10(8): 3759-3768
9. Nyongesa, A.M., Aywa, S. & Okelo, N.B. (2021). Algebra Automorphism Modulus Additive Conditions for Surjective Maps on Unital C*-Algebra. *International Journal of Modern Computation, Information and Communication Technology*. Vol. 2 (7). Pp1-6.
10. Nyongesa, A.M., Aywa, S. & Okelo, N.B. (2021). Certain Preserver Conditions for Automorphisms on Unital C*-Algebra. (2021). *Global Scientific Journals*. Vol.9 (4).
11. Sirengo L. J., Nyongesa, L. K. & Aywa, S. (2020). An M-Stage Hierarchical Group Testing for Estimating Multiple Traits in a Population. *IOSR Journal of Mathematics (IOSR-JM)*. Vol. 16 (3). Pp 29-34.
12. Sirengo L. J., Nyongesa, L. K. & Aywa, S. (2020). Estimation of Multiple Traits in an M-Stage Group Testing Model. *Applied Mathematical Sciences*. Vol. 14 (5). Pp235-243.
13. Mukudi, F., Mile, J., Chikamai, L., & Aywa, S. (2020). Strong Commutativity of Unbounded Self-adjoint Operators on a Separable Hilbert space.

14. Wegulo, M.E.O., Aywa, S. & Okelo, N. B. (2019). On Spectra of n -hyponormal operators in Hilbert Space. *International Journal of Modern Computation, Information and Communication Technology*. Vol. 2 (7).
15. Cyprian, O. S., Aywa, S., & Chikamai, L. (2018). Some properties of the joint numerical range of the aluthge transform.
16. Olege, F., Oduor, O. M., Aywa, S., & Okaka, C. A. (2016). Characterization of codes of ideals of the polynomial ring $\mathbb{Z}_2[x] \text{ mod } (x^3 - 1)$ for error control in computer applicatons.
17. Otanga LO, Aywa S, Owino MO. On generation of measurable covers for measurable sets using multiple integral of functions (2015)
18. Otanga OL, Oduor MO, Aywa SO. Partition of measurable sets. *Journal of Advances in Mathematics*. 2015;10(8):3759-63.
19. Wanambisi, A., Aywa, S., Maende, C., & Muketha, G. M. Advances in composite integer factorization. (2013)
20. AW Wanambisi, S Aywa, C Maende, GM Muketha . Algebraic approach to composite integer factorization (2013)
21. Musundi, S. Aywa and Fourie J. "Equivalent Banach Operator Ideal Norms" *International Journal of Mathematical Analysis*, Vol. 6 (2012) No. 1, pg 19-27
22. Musundi S., Aywa S., Jan Fourie, Matuya J.W. "Unconditional Banach Space Ideal Property" *Journal of Mathematical Sciences Advances and Applications* Vol 18 No.1-2, 2012 pg 21-28
23. Aywa S. and Fourie, J.H. "Spaces of Compact Operators and their dual spaces" *Rendiconti del circolo Mathematico di Palermo, Serie II, Tomo LIII* (2004) pg 205-224
24. Aywa S. and Fourie, J.H "On Summing Multipliers and Applications" *J. Math Analysis and Applications* 253 (2001) pg 166-186
25. Aywa S and Fourie, J. H. "On Convergence of Sections of Sequences in Banach Spaces". *Rendiconti Del Circolo Matematico di Palermo, Series II, Tomo XLIX* (2000) pg 141-150
26. **Aywa S.** —Sequence in the Range of a Vector-Valued Measure. *Journal of School of Computer, Statistical and Mathematical Sciences* (1999)
27. **Aywa , S** and Fourie, J. H. —On Convergence of Sections of Sequences in Banach Spaces. *Rendiconti del Circolo Matematico di Palermo. Series II, Tomo XLIX* (2000), pg. 141 – 150
28. **Aywa S.** and Fourie, J. H. —On Summing Multipliers and Applications. *J. Math Analysis and Applications* 253 (2001), pg. 166 – 186
29. **Aywa S.** and Fourie J. H. —Spaces of Compact Operators and their Dual Spaces, *Business Mathematics and Informatics* (2002) FABW-N-WST:2002-101
30. Aywa, S and Fourie, J. H. —Spaces of Compact Operators and their Dual Spaces. *Rendiconti del Circolo Mathematico di Palermo, Serie II, Tomo LIII*(2004), pg. 205-224
31. Owino, M and **Aywa, S.** —Measurable Feller Semigroups on \mathbb{R}^n . *J-STEM* (2007) ISSN 1991 – 2889 Vol. No. 2 PP37-45

32. Musundi S. **Aywa S.** Jan Fourie, Matuya J. W. —Unconditional Banach Space Ideal Property|| Journal of Mathematical Sciences Advances and Applications Vol. 18 No. 1 – 2, 2012pg 21– 28.
33. P. Rotich, D. Ochieng and **S. Aywa**, —Income Source Diversification and Financial Performance of Commercial Banks in Kenya. International Journal of Business and Public Management (ISSN:2223-6244) Vol. 1(1):26-35
34. S. Musundi, **S. Aywa**, and Fourie J. —Equivalent Banach Operator Ideal Norms|| International Journal of Mathematical Analysis, Vol. 6 (2012) No. 1, pg 19-27
35. John W. Matuya, P. Makila, Simiyu A, **S. Aywa**, Musundi S. —On Characterization of U-ideals determined by Sequences|| Asian Journal of Current Engineering and Maths ISSN No. 2277-4920 (2012)
36. Wanyonyi J. W. Simiyu A., **Aywa S.**, Kirui S. C. —On Redemacher Boundedness in Operator- Norm —Journal of Agriculture, Pure and Applied Science and Technology ISSN 2073-8749 (2012).
37. Matuya J. W., Simiyu A., **Aywa S.**, —On Some Aspects of U-ideal Determined by c, and co.|| Research inventory: International Journal of Engineering and Science. Vol 2 Issue 9 (April 2013) pg. 19-23. ISSN€ 2278-4721 ISSN (p) 2319-6483.
38. Musundi S. W., Ombaka C. O., Njogu S. M., Muthengi F., Mugambi D. , **Aywa S. O.** —Conjecture of Banach Space Operator Ideals in Nuclear Spaces.|| Asian Journal of Current Engineering and Maths ISSN No. 2277-4920 (June 2013) pg 196 – 200.
39. Olege F., **Aywa S.**, Rao R. D. K., Wanambisi A. —Ideals of polynomial Ring for Error Control in Computer Applications. Mathematical Theory and Modeling ISSN 2225 – 0522 (p) ISSN 2224 – 5804 online Vol. 3 No. 7 (2013) Pg. 55-63.
40. Aldrin W. Wanambisi, Cleophas Maende, Geoffrey Muchiri Muketha, **Shem Aywa** —A Probabilistic Data Encryption Scheme (PDES)|| Journal of Natural Sciences Research, ISSN 2224-3186 (Paper) ISSN 2225-0921 (Online) Vol. 3, No. 1, 2013.
41. Aldrin W. Wanambisi, **Shem Aywa**, Cleophas Maende, Geoffrey Muchiri Muketha —Factorization of Large Composite Integer|| International Journal of Mathematics and , Studies Vol. 1, March 2013, pp. 39-44.
42. Aldrin W. Wanambisi, **Shem Aywa**, Cleophas Maende, Geoffrey Muchiri Muketha. Advances in composite integer factorization. Mathematical Theory and Modeling. Vol 3, No 2 (2013)
43. Wanambisi A. W., **Aywa S.**, Maende C., Muketha G. M. —Algebraic Approach to Composite Integer Factorization||, International Journal of Mathematics and Statistics, March 2013.
44. Duncan O. Oganga, Michael O. Okoya, **Shem O. Aywa**, George O. Lawi and Joyce K.

Nthiiri

(2014). Finite difference solution of third order viscous wave equation. International Journal of Engineering, Science and Mathematics. Vol. 3 Issue 4 pgs 56-65 ISSN 2320-0294.

45. Adenya R. K., Okoya M. O., Aywa S. O. and Oganga D. O. (2015). Mixed Galerkin Finite Element Solution of the Homogenous Burgers Equation. IJESR Vol. 3, Issue 2. ISSN: 2347-6532.
46. Otanga Levi O., Aywa Shem O., Owino M. O. —Generation for Measurable Covers for Measurable Sets Using Multiple Integral of Functions. 2015 pp 32 – 41 science sign Post Publishing
47. Otanga L.O., Owino M.O., and Aywa S. O. Partition of Measurable Sets. 2015 Journal of Advances in Mathematics ISSN2347-1921 Vol. 10 No. 8
48. Manyey S. K.T., Maiyo J. K., Odebero S. O. & Aywa S. State of teaching facilities in Public middle level colleges in North-Rift Region, Kenya: Implications for wastage rates. International Journal Of Business And Public Management In press

BOOKS

1. **Aywa, S**; Agure, J.O; Rao, W. —Aspects of (p,q) Summing Multipliers. VDM Verlag Dr. Muller Aktiengesellschaft & Co
2. Primary Mathematics Methodology by Tsuma Watsuma (Edited and Wrote a preface) 2011. ISBN 095-9974-9971-04
3. Fundamentals of Disaster Management and Humanitarian Assistance by Kiluva (Edited the book) 2011

Thesis Examination

1. Ruto Peter Kiptoo, MSc. Thesis, 2008
2. Ubaga Eliud Oketch, MSc. Thesis, —Multi-regression modeling of mode of delivery maternal and perinatal outcomes in Kakamega District, Kenya. 2009
3. Syaywa John Paul, MSc, Thesis, —Group testing using Block testing in the presence of Errors. 2009
4. Bonyo Job Otieno, Msc. Thesis, —Norm of a Derivation, Maseno University 2010
5. Wambua Victoria, Msc. Thesis, —Calculations for mutations of quivers with potential. Maseno University 2010
6. Ambogo David Otieno, MSC. Thesis, —On completely Bounded Operators, Maseno University 2011
7. Kisengo Kibeu Samuel, Msc Thesis, —Numerical Ranges and Spectra, Maseno University 2011

8. Okoth Isaac Owino, Msc Thesis, Maseno University 2010
9. Samuel B. Sindayigaya, Msc Thesis, —Poverty Estimation Model with Assessment of One Cow One Familyl MMUST 2010
10. Okello Irene Ochieng, Msc Thesis, —Investigating the Maximal Determinant for an NXM Matrix, Jomo Kenyatta University, 2011
11. Makwata Harun Msc Thesis, —The Dynamics of a Fishery Model with Price Dependent harvesting, MMUST 2011
12. Rupiah Alice Shibia, Med Thesis, —The Perception of Civil Servants Towards promotion on Merit MMUST, 2010
13. Benard Wakhu Rapando, Msc Thesis —High Critical Temperature of Super-Conducting Cuprates, MMUST 2011
14. Michael Onyango Ojiema, —On the Structures of the Unit Groups of Power Four Radical Zero Commutative Completely Primary Finite Rings. MSc. Thesis in Pure Mathematics, 2013
15. Paul Oleche, PhD Thesis, Maseno University 2008
16. Justus Mile PhD Thesis, Maseno University 2009
17. Simiyu Achilles Nyongesa, PhD Thesis, Maseno University 2011
18. Lydia Kananu Rukaria, PhD Thesis. Linear Codes Obtained From the Symplectic Group $S_8(2)$ 2018 Kibabii University
19. Blasio Omulama Amoche MSc Thesis. Bayesian Hierarchical Approach to Modelling Risk Miscarriage During First Trimester of Subsequent Inter-uterine Pregnancy in Women. 2021. Kibabii University
20. Andanje Mulambula PhD Thesis. On the European Type Option Pricing With Jump Diffusion 2021. Kibabii University
21. Wakwabubi Christine Nasimiyu. MSc Thesis. A Mathematical Model for Rotavarian Infection. Incorporating Time Delay on Effectiveness of Vaccination Within Treatment. 2024. Kibabii University
22. Sikolia Murunga Jacinta. MSc Thesis. Character Table of the Maximal Sub-Group of $2^7 : G_2(2)$ of the Affine Sub Group $SP_8(2)$ by Fischer Clifford Matrices 2024. Kibabii University
23. Andrew Masibayi. PhD Thesis Estimating Minimum Safe Distance Between Industries Emitting Sulfur Dioxide gas and Residential Houses. 2024. Kibabii University
24. Masiga Elizabeth Nanjala. MSC Thesis: Some Binary Linear Codes, Designs and Graphs from the Orthogonal Group $O-8$ and $O+8(2)$. Kibabii University, 2024.

25. Muhati Nelson Lwoyelo. PhD Thesis: Bayesian Hierarchical Modelling for Predicting Treatment Outcomes in Breast Cancer Patients. Kibabii University. 2025.

Supervision of MSc Students

1. Igunza, N. —On Numerical Ranges and Norms of Diversifications. MSc Thesis, 2003 Maseno University.
2. G. K. Rao —(p,q) Summing Multipliers and Applications MSc Thesis 2003 Maseno University.
3. Owino Maurice MSc. Thesis 2005 —Measurable Feller Semi Groups on \mathbf{R}^N , Maseno University.
4. Nyamwala Fredrick MSc. Thesis 2005.
5. Makila P. Wanjala, Integrable Feller Semi Group on \mathbf{R}^N MSc. Thesis 2009 MMUST.
6. Matuya John Wanyonyi, —Operator Valued Multiplier Theorems, MSc. Thesis, 2009 MMUST.
7. Mugele Joseph Oduor, Management of Secondary School Data in Kenya. A case Study of Busia District. Med. Thesis 2009 MMUST
8. Shikuku Beatrice Nakhanu. Effect of Syllabus Coverage on Student Performance in Mathematics. A case Study of Kakamega South District Kenya MEd Thesis 2009 MMUST
9. Wanambisi Aldrin Wekesa. Probabilistic of Secondary School Teachers Data in Kenya. A case Study of Busia District MSc Thesis 2009 MMUST
10. Amin W Yusuf. Determination of the Characteristic Equation of a square Matrix using Sub Matrices. 2009 MMUST
11. Joel Shikuku Barasa. Semi-group Approach to Measure spaces. 2009 MMUST
12. Siaywa John Paul. Group Testing Using Block Testing Strategy in the presence of Test Errors. 2009. MMUST.
13. Samuel B. Sindayigaya. Poverty Estimation Model With Assessment of One- Cow One-Family Program. 2010. MMUST
14. Kagendo, J —Split Operator Method for Parabolic Partial Differential Equations. MSc Thesis, 2010, MMUST.
15. Mabonga, —Factors Influencing Access of Public University Education in Bungoma West District, Kenya. Med. Thesis, 2010. MMUST
16. Prichani Joseck Simiyu. Saratuki Equations of Motion for n-tapo Pendulum Systems. 2010. MMUST
17. Wabuti Protus Shisia. Finite Difference Method for the Burgers Equation 2010. MMUST
18. Adeg M. Application of h-Ideals of Banach Spaces. MSc Thesis 2011 MMUST
19. Haggai Amakobe James. Numerical Solution of the Beam Equation. 2011 MMUST
20. Kaunda Zakary K. Application of U-Ideals of Banach Spaces. MSc Thesis 2011 MMUST
21. Khaguli R Rodgers. Galerking finite Element Solution to the Homogenous Burgers

- Equations MSc Thesis 2011 MMUST
22. Misiko Simon Kakai. Summing Operators on the Space C with Values in c_0 . MSc Thesis 2011 MMUST
 23. Teimet Paul Rotich. The Impact of Income Source Diversification on Financial Performance on Commercial Banks in Kenya. MSc Thesis 2011 MMUST
 24. Olwamba Levy Otanga. Investigating Cubic Measures With Applications to Measurable Spaces. MSc Thesis 2012 MMUST
 25. Abel Tinega. Finite Difference Solution of Sine-Gordon Equation. A Mathematical Model for the Rigid Pendula Attached to a stretched wire. 2012. MMUST
 26. Aggrey Libendi Omamo. 0-Divisor Graphs of a class of Commutative Completely Primary Finite Rings MSc Thesis 2013 MMUST
 27. Mugele Joseph Odour, —Management of Secondary School Teachers Data in Kenya. A case of Busia District. M. Ed. Thesis 2009 MMUST.
 28. Manyei SK. State of Teaching Facilities in Public Middle Level Colleges in North Rift Region, Kenya. Implications for Wastage Rates. 2009. MMUST
 29. Shikuku Beatrice Nakhanu, —Effect of Syllabus Coverage on Student Performance in Mathematics: A case of Kakamega South District, Kenya. M.Ed. Thesis, 2009 MMUST.
 30. Adegü, M. —Application of h -Ideals of Banach Spaces. MSc thesis 2011 MMUST.
 31. Kaunda, Zachary K. —application of U -Ideals to Banach Spaces, MSc. Thesis 2011, MMUST.
 32. Khaguli, R. —Galerkin Finite Element Solution for the Homogenous Burgers Equation. MSc Thesis 2011 MMUST.
 33. Misiko, Simon Kakai. —Summing Operators on the Space $C([0,1], X)$ with values in c_0 . MSc thesis 2011. MMUST.
 34. Teimet, Paul Rotich. —The Impact of Income Source Diversification on Financial Performance of Commercial Banks in Kenya. MSc Thesis 2011 MMUST.
 35. Olwamba, Levi Otanga, —Investigating Cubic Measures with Application to Measurable Spaces. MSc Thesis, 2012 MMUST.
 36. Aggrey Libendi Omamo —Zero Divisor Graphs of a Class of Commutative Completely Primary Finite Rings. MSc. Thesis 2013.
 37. Makau, —Finite difference Solution of BOUSSINESQ Equation. MSc. 2015. MMUST.
 38. Otieno Duncan. Finite Difference Solution of Third Order Viscous Wave Equation 2015. MMUST
 39. Wanambisi, Aldrin Wekesa. —Probabilistic of Secondary School Teachers Data in Kenya. A case of Busia District. MSc. Thesis 2017. MMUST.
 40. Olege Fanuel. On the Generation of Codes of Ideals of the Polynomial Ring for Error Correction. 2017. MMUST
 41. Yvonne Kariuki Wakuthii. Some Ternary Linear Codes and Designs Obtained From the Projective Special Linear Group $L_3(4)$. 2020 Kibabii University
 42. Martin Wegulo. Characterization of Hyponormal Spectra of Operators in Hilbert Space.

2022. Kibabii
43. Mulongo P. W. Isometrically Equivalent Norms in A Banach Space. 2024. Kibabii
44. Satia Ernest. Non- Standard Analysis on a Self-Similar Fractal Curve. 2024 Kibabii

Supervision of PhD Students

1. Musundi, Wabomba, —On Norms of Ideals. PhD thesis, (2012). MMUST
2. Matuya, John. —On u -Ideals Determined by Sequences. Ph.D. (2013) MMUST.
3. Meli Collins Kimutai —On Characterization of Polynomically Bounded Operators in Hilbert Spaces. 2018. Kibabii University.
4. Otanga Levy. Partition of Measurable Sets. 2018. MMUST
5. Cyprian Omukhwaya Sakwa, —On Joint Essential Maximal Numerical Range of Aluthge Transform. 2019. Kibabii University.
6. Cedric Wanjala Ndarinyo. Binary Linear Codes Obtained From the Alternating Group $(AN, N=5,7,9)$. 2019. Kibabii University
7. Kayiita Kaunda. On Compact Operators Between Banach-Koordinat (BK) Spaces 2020. Kibabii University.
8. Sirengo J. Estimation of Population Multiple Traits in an M-Stage Group Testing Model. 2020. Kibabii University
9. Olege, Fanuel. —Ideals of the Polynominal Ring $F_2[x]/\text{mod}(x^n-1)$ for error Control in Computer Applications 2020. MMUST.
10. Wanambisi, Aldrin. —A Bounded Linear Operator on a Separable Hilbert Space with an Invariant Subspace Applied to Cryptography. 2020. MMUST.
11. Nyongesa Abraham Matayo, —Norm Preserving Conditions for Automorphism of Unitah c^* - Algebras. 2022 Kibabii University.
12. Marani, Vincent. Codes Graphs and Designs From the Matheu Group M-24. 2022 Kibabii
13. Mugudi. Strong Commutativity of unbounded Self Adjoined Operators on A Separable Hilber Space. 2022. Kibabii University
14. Joel Shikuku Barasa, —Circularity of Numerical Ranges of Isometrically Bounded Operators on Hilbert spaces 2024. Kibabii University

Reviewer/Referee

Journal of Agriculture, Science and Technology (JAGST), JKUAT, Kenya

Mentorship

1. Invited as guest speaker at Ebusakami Secondary School on 21st October 2000
2. Invited as guest of honour at the Prize giving day for Emuhaya District, 2nd August 2008
3. Invited as Chief guest at the Annual General Meeting Bunyore Girls' High School 4th July 2009

4. Invited as Principal Guest at the Annual Maseno National Mathematics Contest, 5th June 2010
5. Invited as Guest Speaker at Kakamega High School 5th Edition Annual Mathematics Contest, 25th June 2011
6. Invited as Guest of Honour during Lugari District Education Day, 6th May 2011
7. Invited as Chief Guest at the District Evaluation Test release at St. Agnes Girls' High School – Shibuye, 24th September 2010.
8. Invited as Guest of Honour at St. Joseph's Mukulusu Secondary School, Annual General Meeting, Prize Giving and Prayers for candidates of 2009, 2nd October 2009.
9. Invited as Guest of Honour at Nyang'ori Boys High School's Annual General Meeting cum Prize Giving Day on 8th June 2013.
10. Invited as Guest of Honour at Kimilili Boys' High School's Annual General Meeting cum Prize Giving Day in July 2013.
11. Invited as Guest of Honour at Wamalwa Kijana High School during the Bungoma Municipality Zonal Academic Day on 20th June, 2014
12. Invited as Chief Guest of Honour at St. Mary's Kibabii Boys High School in April, 2015

Participation in Conferences

1. SMSA Annual Conference – Pretoria 1997 – Sectional Convergence in Vector Sequence Spaces.
2. SMSA Annual Conference – Potchefstroom 2005:- Feller Semi Groups in R_n .
3. 1st Kenyatta University International Conference of Mathematics (8th – 10th June 2011), Kenyatta University.
4. The First National Council for Science and Technology week 7th – 11th May 2012.
5. 47th Annual Congress of the South African Mathematical Society November 2004, Pretoria.
6. Conference for Disaster Management and Humanitarian Security 11th – 13th October 2006, Kakamega.
7. 7th Leadership Development Workshop (LEDEV VII) at Kampala from 10th to 14th February, 2014.
8. Workshop for Pension Trustees in Nairobi in 2015

Seminars /Training Attended

1. Deans' International Course, Osnurbruck, Germany, May 7th – 11th 2007.
2. Five Day Course for Directors in Corporate Governance Training, Whitesands,

Mombasa, September 2011.

3. Deans' International Course, Nairobi – Kenya 1st – 2nd October 2007.
4. Deans' International Course, Addis Ababa, Ethiopia 11th – 15th February 2008.
5. Introduction to participatory Integrated Community Development Process, Golf Hotel, 10th – 14th August 2009.
6. Fire Risk Mitigation and Preparedness Workshop, MMUST 24th – 26th June 2009.
7. Implementation of ISO 9001:2000 Seminar, MMUST 29th – 31st May 2006.
8. The Gender Sensitization Workshop at Savona Isle Resort, Kakamega 2nd April 2008.
9. Education stakeholders' workshop, at Trinity Fellowship-Maseno 27th and 28th February 2009
10. Two Day Course for Management and Council in Corporate Governance training at Kibabii University College in May 2014.
11. ANSTI Deans and Vice Chancellors' Conference Pretoria 2007.
12. Kibabii University College Council workshop from 6th – 10th November, 2013.
13. CUE University Exhibitions at Eldoret in March 2014.
14. CUE University Exhibitions at Machakos in March, 2015
15. Haggai International Advanced Leadership Seminar 2024
16. Globeserve Exponential Disciple-making Seminar 2025.
17. Ellel Ministries Discipleship Training, 2025.

Other Appointments

1. Returning Officer for the Students' Union Constitution Commission Review Referendum 14th November, 2005, 2006, 2007, 2008 at MMUST.
2. Chairman Ushering Committee for Graduation Ceremony 2007 – 2012, at MMUST.
3. Member of Committee for Symposium in Strategic Management and Planning 2008 to 2012, MMUST.
4. Participated in the 2nd East Africa Universities Exhibitions in Kampala 6th – 8th June 2008, MMUST.
5. Member, Senate ADHOC Committee to host JAB Meeting at MMUST 2008
6. Member, MMUST Peace and Harmony Senate ADHOC Committee, 2009 MMUST
7. Chairman Appeals Committee for Deans of Faculties Elections, 2011, MMUST.
8. Member, Senate ADHOC Committee for Engineering Programmes, 2011 MMUST
9. Member, Corruption Prevention Committee/Integrity Committee, 2013, Kibabii
10. Chair of ADHOC Committee for drafting proposal for loan from industrial and commercial development corporation (ICDC) 2014, Kibabii
11. Chairperson short listing Committee 2014, Kibabii
12. Pastor Kakamega Pentecostal Church 2009-Present

13. Enternal Examiner for the Department of Mathematics, Sem. Two 2020/2021.
14. Chairperson, Ad Hoc committee on Examination Misconduct committed in academic year 2022/2023.
15. Chairperson, Ad Hoc committee on Review of Guidelines for Appointment and Promotion of Teaching Staff (Grade 10-15). 2024.

Research

1. Joint Research: Shem Aywa MMUST and Jan Fourie, North-West University S.A
Title: —On Ideals in Banach Spaces‖ 2010 – 2015.

Research Awards

1. University Research Fund Awards of Kshs. 100,000.00, 2009. Title:- Promoting Mathematics and Physics Education in Schools in Kenya.
2. National Council for Science and Technology, Research Grant of Kshs. 1.2M for my Ph.D Student 2010-2012 on —Norms of Ideals‖.
3. National Council for Science and Technology, Research Grant of Kshs. 400,000.00 for my PhD Student 2011-2013 Title:- On U-Ideals Determined by Sequences.
4. National Council of Science and Technology (NASCOTI), Research Grant of Kshs. 800,000/= for my Ph.D. student 2014-2016.

Achievements during my Tenure as Deputy Principal Administration and Finance

I. Planning

- i. Developed Kibabii University strategic plan (2015-2019)
- ii. Developed Master Plan (2014-2019)
- iii. Developed policies e.g. staff retention policy
- iv. Improved grade for performance contracting
- v. ISO certification process at the final stage
- vi. Quality Assurance directorate in place
- vii. Award of tender for construction of phase II of Academic Block; done on 8th May 2015, construction is nearly complete

II. Administration

- i. Employment of qualified staff
- ii. Organized staff induction workshop
- iii. Sponsored staff for workshops and seminars

- iv. Introduced staff appraisal mechanism

III. Finance

- i. Introduced the Enterprise Resource Planning (ERP) system to manage finances
- ii. Divided finance department into sub-sections, each with its mandate for efficiency, transparency and accountability
- iii. Uploaded students' fees statements on the Kibabii University Website
- iv. Improved fee collection
- v. Prompt statutory fee payments e. g. KRA, Pension, SACCO deductions, Loans
- vi. Practiced prudent utilization of funds

IV. Development

- i. Completion of phase I of academia block, this has been used by our students for classes and examinations
- ii. Completion of construction of oxidation ponds, which are now operational
- iii. Completion of construction of underground water tank (100% complete); we hope to award tender for construction of other tanks
- iv. Completed construction of bore hall
- v. Spearheaded the planting of trees and flowers at the University
- vi. Tarmacking of the road from main highway to the gate of the University
- vii. Completed construction of main car park
- viii. Construction of science laboratories for; Agriculture, Biological Sciences, Chemistry and Physics
- ix. Equipping of the University laboratories and kitchen
- x. Procurement of furniture and vehicles
- xi. Acquisition of bandwidth to improve internet connectivity at the University
- xii. Procurement of library books and e-journals
- xiii. Construction of health Unit
- xiv. Construction of sports complex; basketball, handball and volleyball pitches are in use
- xv. Acquisition of land (5acres at Sirisia)
- xvi. Acquisition and repair of chairs for students

V. Staff

- i. Employment of new staff (316)
- ii. The following positions have been appointed;
 - a. -Professors

- b. -Senior Lecturers
 - c. -Lecturers
 - d. -Tutorial Fellows
 - e. -Administrators
- iii. Orientation of new staff done, staff inducted on the rules, regulations, procedures and structure of the University.
 - iv. University Staff appraisal and appointment committee has done internal advertisement for staff who qualify for promotion.
 - v. Staff Unions; All the three staff unions are actively engaged by the management through regular meetings, UASU, KUSU and KUDHEHIA KIBU Chapter have given their proposal CBA
 - vi. Staff Co-operative Organization (SACCO); The KIBU SACCO held their Second Annual General Meeting on 25th April 2015. Audit report shows that it made a profit and the books of account are well kept. Staff are encouraged to join the SACCO, with support of management, SACCO is buying 5 acres of land to be distributed into plots for members
 - vii. Pension Scheme; The scheme is in place, all new members have been admitted to the KIBU Pension Scheme. The staff Pension Scheme Committee has regular meetings with the administrator, custodian and investment advisor
 - viii. Staff Dependants Scholarships: Members of staff have benefitted from the staff dependant scholarship. Their dependants receive 50% tuition fee waiver.

VI. Health Services

The University has set up a medical laboratory and HIV / AIDS testing Unit. Qualified staff have been employed and more equipment acquired to improve the medical services. Pharmacy store and service s have been improved. A number of hospitals and doctors have been contracted to provide specialized services to staff on referral by our clinic

VII. Environmental Conservation

The University in conjunction with the community has planted over 800 trees and flowers in the compound. One day was dedicated to the 148 students of Garissa University Collage where 148 trees were planted at the oxidation ponds. Special grass has been procured to be planted at the car park.

Referees:

1. Professor Romanus Odhiambo Vice
Chancellor Meru University of Science and
Technology

P.O. Box 972-60200
Meru Kenya
Mobile 0714491445

2. Professor Watson
Omukoli,
Africa International University,
P.O. Box 24686 – 00502,
KAREN, NAIROBI.
Telephone: 072080375
Email: omukoli@yahoo.com
3. Prof. John Shiundu,
Masinde Muliro University of Science & Technology,
P. O. Box 190,
Kakamega.
Email:
4. Prof. Solomon I. Shibairo,
Vice Chancellor, MMUST.
P. O. Box 190,
Kakamega.
Email:
5. Prof. Dr. Bennedict Mutua,
Vice Chancellor, TUK,
P.O. Box
Nairobi.
Email: