


# CURRICULUM VITAE

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## PERSONAL INFORMATION:

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|  | <p><b>DR. OJIEMA MICHAEL ONYANGO</b><br/>Mathematics Department,<br/>Masinde Muliro University of Science &amp; Technology.<br/>P.O Box 190-50100, <b>KAKAMEGA-KENYA.</b><br/>Or<br/><b>Home Address:</b> SINO D. O.H PRIMARY<br/>SCHOOL, P.O Box 99 – 40222, OYUGIS.<br/><b>E-mail:</b><a href="mailto:mojiema@mmust.ac.ke">mojiema@mmust.ac.ke</a>, or<br/><a href="mailto:michael_ojiema@yahoo.com">michael_ojiema@yahoo.com</a><br/>Cell No.: +254710469974.</p> |
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**Date of Birth:** 24<sup>th</sup> December, 1987.  
**Nationality:** Kenyan.  
**Passport/ID No:** A2328930/24985628.  
**Sex:** Male.  
**Religion:** Christian.  
**Marital Status:** Married (with 2 children).  
**Languages:** Kiswahili & English (written and spoken).  
**Physical Data:** Height 5.1ft; Weight (75kg).

## CAREER ASPIRATIONS:

- To apply my knowledge as a Mathematician in simplifying the abstract nature of pure mathematics and exploring its applicability in real life, through extensive research and teaching. My area of research interest is Algebra and Geometry (Structure theory of finite rings, Automorphisms of Algebraic structures, Extensions of Lie Algebras, Coding Theory, and Differential Geometry).

## ACADEMIC QUALIFICATIONS:

**2016** – Ph.D in Pure Mathematics, Maseno University, Kenya.

**DISSERTATION:** Automorphisms of the Unit groups of Square radical zero, Cube radical zero and Power four radical zero finite commutative completely primary rings.

**2014**-Ph.D Research work (Mathematics): University of Kwazulu-Natal, South Africa.

**RESEARCH:** Classification Problems in Algebra and Geometry

**2011 -2013**- Master of Science(MSc. ) in Pure Mathematics; Masinde Muliro University of Science and Technology, Kenya

**RESEARCH:** On the Structures of the Unit Groups of Power Four Radical Zero Commutative Completely Primary Finite Rings.

2007-2011 - Bachelor of Education Science (Mathematics and Physics with Major in Mathematics): Masinde Muliro University of Science and Technology.

2002-2005 - K.C.S.E: St. George's Secondary School

1994-2001 - K.C.P.E: Sino D.O.H Primary School.

## **RESEARCH PUBLICATIONS**

### **Paper(s) in refereed journals & Book(s)/Book chapters published**

1. Kamran Azhar, Sohail Zafar, Agha Kashif & **Michael Onyango Ojiema** : Fault-Tolerant Partition Resolvability of Cyclic Networks, *Hindawi Journal of Mathematics*, **Vol. 1(2021)**, 1- 8, Article ID 7237168, <https://doi.org/10.1155/2021/7237168>.
2. **Ojiema, O.M**, Achieng, O.B, & Motanya, A. J. (2020): "A Characterization of Frobenius Derivations and Automorphisms of a Class of Local Near-Rings" : A chapter in the Book: **Theory and Practice of Mathematics and Computer Science, Vol.6 JAMCS**, Book Publisher International, UK. Print ISBN Number: 978-93-90516-14-8, E- ISBN Number: 978-93-90516-19-3.
3. Lao Hussein Mude, Owino Maurice Oduor & **Ojiema Michael Onyango**: Automorphisms of Zero Divisor Graphs of Square Radical Zero Commutative Unital Finite Rings, *Journal of Advances in Mathematics* 19(1), (2020), 35-39.
4. **Ojiema, O.M**, Achieng, O.B, & Motanya, A. J.: On A Class of Idealized Near-Rings Admitting Frobenius Derivations, *Journal of Advances in Mathematics and Computer Science*, 35(5), (2020), 1-9.
5. **Ojiema M. Onyango**, Mengich Beatrice & W. A. Wanambisi: Certain Geometric Aspects of A class of Almost Contact structures on a smooth Metric Manifold, *AJROM*, 16(2), and (2020), 24-38.
6. Yvonne W. Kariuki, **Ojiema M. Onyango** & Okombo M. Immaculate: On some Ternary linear codes and Designs Obtained from the Projective Special Linear Group PSL<sub>3</sub>(4), *AJROM*, 15(4), (2019), 1-17.
7. Lao Hussein Mude, Owino Maurice Oduor & **Ojiema Michael Onyango**: Automorphisms of Zero Divisor Graphs of Galois Rings, *International Journal of Algebra*, 13(8), (2019), 401-406.
8. **Ojiema M. Onyango**, Wafula J. Wenani & Simiyu A. Nyongesa: A characterization of A special class of operator Matrices, *AJROM*, 11(3), (2018), 1-15.
9. Ndago F. Omondi, **Ojiema M. Onyango** & Owino M. Oduor : On the Adjacency and Incidence Matrices of the Zero Divisor Graphs of A class of the Square radical Zero finite Commutative Rings, *IJPAM*, 118(3), (2018), 773-789.
10. **Ojiema Michael Onyango**: (2017) "Automorphisms of the Unit Groups of Classes of Completely Primary finite Rings", L AP, Omniscryptum GmbH & Co. KG, Deutschland-Germany, ISBN: 987365958368-1.

11. Wanambisi A. Wekesa, Owino M. Oduor, S. Aywa & **Ojiema M. Onyango**, On the Units of a Class of Total Quotient Rings of Characteristic  $p^k$  with  $k \geq 3$ , *International Journal of Algebra*, 11(3), (2017), 127-135.
12. **Ojiema M. Onyango**, Owino M. Oduor & Odhiambo P. Oleche: Automorphisms of the Unit Groups of Square Radical Zero Finite commutative Completely primary Rings, *IJPAM*, 108(1), (2016), 39-48.
13. **Ojiema M. Onyango**, Owino M. Oduor & Odhiambo P. Oleche: Automorphisms of the Unit Groups of Power four radical Zero Finite commutative Completely primary Rings, *Journal of Pure Mathematical Sciences*, 5(1), (2016), 11-25.
14. Owino Maurice Oduor & **Ojiema Michael Onyango** . Unit Groups of Some Classes of Power Four Radical Zero Commutative Completely Primary Finite Rings, *International Journal of Algebra*, 8(8), (2014), 357-363.
15. Owino Maurice Oduor Mmasi Eliud & **Ojiema Michael**, On the Quotient Groups of Subgroups of the Unit Groups of a Class of Completely Primary Finite Rings, *Pure Mathematical Sciences*, 4(3), (2015), 121 – 126.
16. Angwenyi N. David, Lawi George, **Ojiema Michael** & Owino Maurice. On the Computationally Efficient Numerical Solution to the Helmholtz Equation, *International Mathematical Forum*, 9(6), (2014), 259-266.
17. Owino Maurice Oduor, **Ojiema Michael Onyango** & Mmasi Eliud. Units of Commutative Completely Primary Finite Rings of Characteristic  $p^n$ , *International Journal of Algebra*, 7(6), (2013), 259-266.

## **PROFESSIONAL EXPERIENCE/ATTACHMENT**

**April 2021-Date: Senior Lecturer Grade XIII** in the Department of Mathematics of Masinde Muliro University of Science and Technology.

### **Roles and Responsibilities:**

- Teaching Ph.D and Masters Courses of Mathematics in the Department.
- Teaching undergraduate courses of Mathematics in the Department
- Participate in setting, moderating, marking and analyzing examinations for the Courses taught.
- Supervision of Ph.D and MSc. students of Pure Mathematics and Mathematical Sciences
- Course Leader-Pure Mathematics Courses.
- In charge of internships, fieldwork coordination and placements.
- Conducting research work.

**June 2017-Date: Lecturer Grade XII** in the Department of Mathematics of Masinde Muliro University of Science and Technology.

**Roles and Responsibilities:**

- Teaching Ph.D and Masters Courses of Mathematics in the Department.
- Teaching undergraduate courses of Mathematics in the Department
- Participate in setting, moderating, marking and analyzing examinations for the Courses taught.
- Supervision of Ph.D and MSc. students of Pure Mathematics and Mathematical Sciences
- In charge of internships, fieldwork coordination and placements.
- Departmental Graduate School Representative.
- Conducting research work.

**2014-May 2017: Assistant Lecturer Grade XI** in the Department of Mathematics of Masinde Muliro University of Science and Technology.

**Roles and Responsibilities:**

- Teaching undergraduate courses in mathematics.
- Participate in setting, moderating, marking and analyzing examinations for undergraduate courses.
- Supervision of undergraduate students in Pure Mathematics projects
- Conducting research work in Algebra.
- Third years B.Sc. Mathematics students' academic advisor

**2012-2013; Staff development program** in the Department of Mathematics of Masinde Muliro University of Science and Technology.

**Roles and Responsibilities:** As a prospective staff, I was responsible for:

- Teaching diploma and certificate courses in mathematics.
- Co-teaching with the assigned lecturers the undergraduate courses.
- Teaching independently the assigned undergraduate courses in Mathematics.
- Participate in setting, moderating, marking and analyzing examinations for undergraduate courses
- Setting, moderating, marking and analyzing examinations for certificate and diploma
- Conducting research work in Algebra.

**2011-2012; Graduate Teacher (T.S.C)** Namirama Girls High School

**Roles and Responsibilities:** My responsibilities as a graduate teacher were:

**1. Teaching:**

- Teaching Mathematics and Physics from form 1 - 4.
- Setting, moderating, marking and analyzing examinations.
- Organizing and supervising Laboratory practical lessons.
- Offering guidance and counseling to student
- In charge of a particular week (s) within the term.

**2. Head of Department (Mathematics).**

- Making termly and yearly academic calendars.
- Supervising / monitoring the effective curriculum delivery.

- Safe custody of the records of work covered books.
- Organizing inter-stream and inter-class competitions in mathematics.
- Organizing motivational talks.
- A member of Senior Management team.

**April 2011-Dec 2011; Assistant Teacher (B.O.G), St Charles Lwanga Senior School-Mukumu**

**1. Teaching:**

- Teaching Mathematics and Physics from form 1 - 4.
- Setting, moderating, marking and analyzing examinations.
- Organizing and supervising Laboratory practical lessons.

**2. Head of Department (Science).**

- Making termly and yearly academic calendars.
- Supervising / monitoring the effective curriculum delivery.
- Procurement of science materials and laboratory equipment
- Safe custody of the records of work covered books.
- Organizing inter-stream and inter-class competitions.
- Organizing motivational talks.
- A member of Senior Management team.

**3. Science club Patron.**

- Training and preparing students to participate and compete in Students Science Congress up to National Level.
- Planning and organizing Science club internal and external contests and other related activities

**4. Member of the Academic Progress committee and Senior Management.**

**May-Dec 2010 Student Teacher** at St. Joseph's Sino Mixed Secondary School.

**Roles and Responsibilities:** As a student teacher, my direct roles and responsibilities were.

- Teaching Mathematics and Physics to form 1 and 2 students.
- Conducting tutorial lessons.
- Organizing and supervising laboratory practical sessions.
- Setting, moderating, marking and analyzing examinations.

**May-Aug 2009; Team leader,** Research Triangle Institute

**Roles and Responsibilities:** As a team leader my responsibilities were;

- To create awareness about the importance of malaria control in Kano plains.
- Allocate the regions to particular spraying teams
- Supervise the whole progress of the teams.
- Pay allowances given by the organization to the workers.

**OTHER APPOINTMENTS/ENGAGEMENTS AT MMUST**

- **February 2021-Septemeber 2021:** Coordinator Budalangi Study Center.
- **2018 –Date:** Chairman Graduate School Committee (DPS) Representing SONAS.
- **2018-Date:** DCCM Representative in charge of SONAS, TIVET, DPS and SOLACE.
- **April 2017-August 2018:** DGSC Representative for Mathematics Department

- **2017-Date:** Coordinator, Attachments, Internships and Placements , Mathematics Department
- **2017-2018:** Coordinator Vihiga Zone School Practice, SEDU.
- **2014:** Departmental Examination Coordinator-Mathematics Department.

### COMMUNITY SERVICE

- **March 2019-Date: Chairman,** BOM St. Joseph's Sino Secondary School, Oyugis
- **August 2016-Date: Chairman,** BOM Sino D.O.H Primary School.
- **Member Sino Forum for Development:** Focusing on fund raising towards the school fees program for the disadvantaged children in Sino.
- **Youth Director:** Dominion Worship Church Kakamega and F.P.F.K churches.

### MEMEBRSHIP OF PROFESSIONAL BODIES

- Honorary Rosalind Member of London Journal Press ( No. 0066217)
- Member of American Mathematical society.
- Member Mathematical Association of Kenya (MACKNET).
- Reviewer with London Journal Press as a Rosalind Council Member.
- Reviewer with Science Domain International Journals

### RESEARCH FUNDS ATTRACTED

- **2017:** Together with **Hussein Mude Lao.** Ph.D Helb Grant of Kes. 450,000 on the proposed PhD Research: **Atomorphisms of Graphs of finite Rings** under my supervision.
- **March 2015:** NACOSTI PHD research grant (NACOSTI/RCD/ST\$I 6<sup>TH</sup> CALL PHD/263).
- **2015,** MMUST Ph.D partial support to the University of Kwazulu Natal South Africa.

### PRESENTATIONS/WORKSHOPS AND CONFERENCES ATTENDED

- **4<sup>th</sup> -7<sup>th</sup> September 2021: Graph Theory School,** facilitated by Dr. Sonwabile Mafunda at the University of Johannesburg, South Africa.
- **21<sup>st</sup> -26<sup>th</sup> June 2018:** First Pan African International Research Congress on Knowledge Generation and Dissemination (PAIRC 2018), Grand Royal Swiss Hotel, Kisumu[**Presented A paper with Mary Okombo, PhD student**].
- **24<sup>th</sup> June-3<sup>rd</sup> July 2016: Summer School on Algebra, Combinatorics and Statistics** at Aalto University, Espoo, Finland.
- **24<sup>th</sup> June 2014:** Workshop for curriculum Development, Review and Implementation for the Faculty of Science, MMUST
- **23<sup>rd</sup> -24<sup>th</sup> January 2014:** University Multiplication Training Workshop on Curriculum Development and Review for Public Universities in Kenya: Implementation and Accreditation held at MMUST.

### PERSONAL ASSESSMENT:

- I am a team player with strong interpersonal and analytical skills.
- I have the ability to work in a highly competitive environment.

- I am multi-tasking and able to work in unfamiliar environment.
- I am a fast learner and always open to criticisms and new ideas.

### **COMPLETED SUPERVISION OF MASTERS AND PhD STUDENTS**

- FRANK OMONDI NDAGO, MSc. MMUST: **On the Adjacency and Incidence Matrices of zero divisor graphs of Square Radical zero finite commutative Rings.** (Graduated, 2018).
- WENANI JOSEPH WAFULA, MSc. MMUST: **A characterization of Pythagorean Normal Operator Matrices-**(Graduated in 2018).
- BEATRICE MENGICH MSc. MMUST, **On the Differential Geometry of Contact Manifolds (Graduated in 2020).**
- HUSSEIN MUDE LAO, Ph.D, MMUST: **Automorphisms of the Zero Divisor Graphs of Classes of Unital Finite Rings-**(Defended successfully on 28<sup>th</sup> February 2021).

### **ON-GOING SUPERVISION OF POSTGRADUATES.**

1. MARY IMMACULATE OKOMBO, Ph.D., MMUST: **A Classification of Cyclic Ternary Codes over Selected Classes of Galois fields** (Final Thesis Stage).
2. MUSOGA CHRISTOPHER IMBAHALA, Ph.D., MASENO:-**On the Generation of Distinct Subgroups of the Unit Groups of finite Rings** [Final Thesis Stage].
3. DAISY INGADO BINAYO, Ph.D., MMUST: **Aspects of Almost Contact Structures on Smooth Differentiable Manifolds: Applications to M-Theory and Super-gravity**[Proposal Development]
4. ABUGA JOSEPH M. Ph.D., MMUST: **On the Regular Elements and Von-Neumann Inverses of a Class of Near Rings Admitting Frobenous Derivations** [Thesis Development].
5. VIOLET AGALA, MSc. MMUST: **Unit and Cayley Graphs of Maximal Characteristic Local Rings in which the Product of any 4 Zero Divisors is Zero** [Proposal Development]

### **THESES EXAMINED**

1. OWADE KENNEDY, MSC MMUST 2018: **Modelling the Roles of Rehydration and Antibiotic Treatment on Reduction of Cholera Mortality.**
2. MICHAEL MUSYOKI, MSC MMUST 2018: **Modelling the Contribution of Agricultural Gross Domestic Products to the Kenyan GDP.**

## **REFEREES:**

1. **Dr. Achilles Simiyu Nyongesa**  
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Masinde Muliro University of Science & Technology.  
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Mobile: +254722455156. Email: [anyongesa@mmust.ac.ke](mailto:anyongesa@mmust.ac.ke).
  
2. **Prof. Maurice Owino Oduor,**  
Ag. DVC. (PR&I) /Prof. of Pure Mathematics  
Department of Mathematics and Computer Science-University of Kabianga.  
P.O. Box 2030-20200, KERICHO, KENYA  
Mobile: +254721753991. E-mail : [morricearaka@yahoo.com](mailto:morricearaka@yahoo.com).
  
3. **Prof. George Lawi,**  
Ass. Prof. of Applied Mathematics, Mathematics Department, MMUST  
Mobile: +254722353526. Email: [glawi@mmust.ac.ke](mailto:glawi@mmust.ac.ke) .

## **CERTIFICATION**

I, Dr. Ojiema Michael Onyango, do certify that the information provided in this resume is correct.

**Sign:**

**Date: 18<sup>th</sup> December, 2021.**