Richard Otieno Opiyo

Department of Pure and Applied Mathematics   Phone: +254-723637434

Maseno University, Kisumu-Busia Road   Email: richardopiyo08@gmail.com

P.O. Box 333-40105,   rootieno@maseno.ac.ke

Maseno, Kenya

EDUCATION

2014 – 2018:   Doctor of Philosophy in Applied Mathematics **Maseno University**.

Thesis Title: **"Analysis of Heat and Mass transfer effects on steady buoyancy driven Magnetohydrodynamics fluid flow past an inclined infinite flat plate''**

2010 – 2013:   Master of Science in Applied Mathematics **Maseno University**.

Thesis Title: **"Numerical solution of acoustic wave equation with a signal function''**

2004-2008:   Bachelor of Science **(BSC Mathematic) Maseno University**.

Results: F**irst class honors.**

1999-2002:   St. Mathews ACK Secondary School **(KCSE)**

Results: Mean Grade **B+ (plus).**

1990-1998:   Rahongo Primary School **(KCPE)**

RESEARCH EXPERIENCE

I have gained more than 6 years research experience at university level in the field of Applied Mathematics.

Fields of Research Interests

- Computational Fluid Dynamics
- Heat and Mass Transfer
- Magnetohydrodynamics fluid flow
- Analytical and numerical solutions of PDEs and ODEs
- Mathematical modelling

TEACHING EXPERIENCE

I have a vast experience in Applied mathematics. My responsibilities included teaching undergraduate and postgraduate mathematics courses and conducting quality research. I have taught many courses in mathematics, ranging from the first year undergraduate to the Masters level. To mention, some of the courses I have taught include:

     i. **Maseno University**: **October 2013 - date**:

Teaching both undergraduate and postgraduate students in Mathematics: Introduction to Calculus, Calculus II, Calculus III, Differential Geometry, Basic Mathematics, Fluid mechanics, Numerical Analysis, Vector Analysis, Ordinary Differential Equations, Partial Differential Equations, Methods, Complex Analysis, Classical mechanics, Fourier Analysis and Operations Research.

HONORS AND AWARDS

Merit Scholarship Holder throughout M.sc and PhD.

PROFESSIONAL MEMBERSHIP

In the process

SKILLS AND TRAINING

I have gained massive skills and training since 1st September 2010 to date traversing various levels of academics from Graduate Assistantship all the way through to Lecturer (PhD).

LEADERSHIP EXPERIENCE

- **Examination coordinator** Department of Pure and Applied Mathematics from September 2012 to January 2020
- **Member**, Departmental Postgraduate Committee, School of Mathematics, Statistics and Actuarial Science, Maseno University from March 2020 to date.

CONFERENCES AND WORKSHOPS

- First Kenyatta University Workshop on Mathematical Modeling 2013 held at Kenyatta University, Nairobi, Kenya, theme: **"Enhancing Mathematical Modeling for Research and Development**" on 17th – 21st June 2013.
- **Strathmore University Mathematics Biology Workshop** during the Strathmore University International Mathematics Research Meeting, theme: **"Enhancing Mathematics Research in African Universities through International Collaboration"** on 23rd – 27th July 2012.
- First Strathmore University Mathematics conference whose theme was to "**Strengthen Mathematics, Research, Application and Education in Africa**" held in Strathmore University on 15th – 20th August 2011.

PUBLICATIONS

1. **Opiyo Richard Otieno, Alfred Manyonge, Owino Maurice and Ochieng Daniel: Finite Difference Analysis of 2-Dimensional Acoustic Wave with a Signal Function** (International Journal of Multidisciplinary Sciences and Engineering, Vol. 6, No. 10, October 2015)
2. **Opiyo Richard Otieno: Von Neumann Stability Analysis of Finite Difference Schemes Applied to Advection Equation** (International Journal of Modern Engineering Research (IJMER), Vol. 6, Issue 10, October 2016)
3. **Opiyo Richard Otieno, Alfred W. Manyonge and Jacob K. Bitok: Numerical Computation of Steady Buoyancy Driven MHD Heat and Mass Transfer Past an Inclined Infinite Flat Plate with Sinusoidal Surface Boundary   Conditions** (Applied Mathematical Sciences, Vol. 11, 2017, no. 15, 711 – 729, HIKARI Ltd, www.m-hikari.com https://doi.org/10.12988/ams.2017.7127)
4. **Opiyo Richard Otieno, Alfred W. Manyonge and Jacob K. Bitok: Similarity**

Transformation Analysis of Heat and Mass Transfer Effects on Steady   Buoyancy Induced MHD Free Convection Flow past an Inclined Surface (Journal   of Innovative Technology and Education, Vol. 4, 2017, no. 1, 83 – 96, HIKARI Ltd, www.m-hikari.com https://doi.org/10.12988/jite.2017.724)

5. **A. W. Manyonge1, R. Opiyo, D. Kweyu: Numerical Solution of Non-Linear Boundary Value Problems of Ordinary Differential Equations Using the Shooting Technique** (Journal of Innovative Technology and Education, Vol. 4, 2017, no. 1, 29 – 36 HIKARI Ltd, www.m-hikari.com https://doi.org/10.12988/jite.2017.61250)