

# ROTICH JOHN KIMUTAI

**Address:** P.O Box 1440-20200, Kericho, Kenya

**Kenyan Citizen:** Identity No. 21753486

**Email:** [johnrotich@kabianga.ac.ke](mailto:johnrotich@kabianga.ac.ke)

**Mobile No:** +254 721 273 327

**Date of Birth:** Feb, 1, 1980

**Marital Status:** Married

**PIN No:** A003386825X

**Religion:** Christian

## Professional Interests

- ❖ Research in Applied Mathematics and related areas
- ❖ Numerical Solutions to Partial Differential Equations
- ❖ Finite Difference Schemes Arising from Operator Splitting for Solving 2 & 3-Dimensional Non-Linear Parabolic Equations

## Education & Qualifications

**2010- Date:** University of Eldoret - Pursuing Doctor of Philosophy in Applied Mathematics.  
P.O Box 1125-30100  
ELDORET.

**Thesis Title:** Finite Difference schemes arising from Operator Splitting for Solving two Dimensional System of Burgers Equations

**2007- 2009:** Kenyatta University, - Msc. (Mathematics) degree in Applied Mathematics.  
P.O Box 43844-00100,  
NAIROBI.

**Thesis Title:** Hybrid Finite Difference schemes arising from Operator Splitting for Solving 2-Dimensional Non-linear Parabolic Equations

**1999 – 2003:** Moi University, - Obtained a B.Ed (Sciences)  
P.O.Box 3900-30100, 2<sup>nd</sup> class Honours (lower division)  
ELDORET. - Obtained certificate in Peer Group Guidance and Counselling

**1994 – 1997:** Kipchimchim Sec. Sch. – Obtained K.C.S.E certificate  
P.O.Box 529-20200,  
KERICHO.

**1985 – 1993:** Cheptorriet Pri. Sch – Obtained K.C.P.E certificate  
P.O.Box 427-20200,  
KERICHO.

## Publications

1. "Intersection Matrices Associated With Non Trivial Suborbit Corresponding to the Action of Rank 3 Groups on The Set of Unordered Pairs" International Journal of Scientific & Technology Research Volume 3, Issue 12, December 2014, 1-7
2. "Crank-Nicholson-Lax-Friedrich's Finite Difference Schemes Arising from Operator Splitting For Solving 2-Dimensional Heat Equation" International Journal of Scientific & Technology Research Volume 3, Issue 11, November 2014, 303-306.
3. "Crank-Nicholson-Du Fort And Frankel-Lax-Friedrich's Hybrid Finite Difference Schemes Arising From Operator Splitting For Solving 2-Dimensional Heat Equation" International Journal of Scientific & Engineering Research, Volume 5, Issue 10, October-2014, 931-934
4. "Hybrid Finite Difference Schemes Arising from Operator Splitting for Solving 2-Dimensional Heat Equation" Journal of Mathematical Sciences Vol.21, No.1 (2010), 1-9.
5. **"Comparison on 2 and 3-Level Crank-Nicholson Based Methods on the Solution of 1-D Heat Equation" Journal of Mathematical Sciences Vol. 21, No.2 (2010), 127-132.**

### Conferences Attended

1. Fifth Annual Kabarak International Research Conference held at Kabarak University on 14<sup>th</sup> - 17<sup>th</sup> July 2015. Presented a paper entitled "Crank-Nicholson, Du-Fort and Frankel Hybrid Finite Differences Schemes Arising from Operator Splitting for Solving Two Dimensional Burgers Equation".
2. Second Kenyatta University International Mathematics Conference, 2015 held at Kenyatta University, Nairobi, Kenya from 16<sup>th</sup> - 19<sup>th</sup> June, 2015. Presented a paper entitled "Crank-Nicholson and Lax-Fredrichs' Hybrid Finite Differences Schemes Arising from Operator Splitting for Solving Two Dimensional Burgers Equation".

### Past Activities & Experience

#### UNIVERSITY OF KABIANGA (SCHOOL OF SCIENCE & TECHNOLOGY)

**AUGUST 2011- DATE:**

***Serving as:***

- Lecturer (Applied Mathematics), Coordinator of Bridging in Mathematics course and Mathematics & Computer Science Department Examination Coordinator.

***Participated in:***

- Stakeholders Workshop on Curriculum Development for the Msc. Applied Mathematics, Msc. Applied Statistics, Msc. Pure Mathematics, Msc. Chemistry and Msc. Microbiology on 24<sup>th</sup> - 26<sup>th</sup> June 2014.
- First Kenyatta University Workshop on Mathematical Modeling, 2013 held at Kenyatta University on 17<sup>th</sup> – 21<sup>st</sup> June 2013.
- Copyright Seminar offered by the Kenya Copyright Board held on 22<sup>nd</sup> March 2013 at University of Kabianga.

- Intellectual property rights workshop facilitated by KIPI, KEPHIS and KECOBO On 22<sup>nd</sup> and 23<sup>rd</sup> March 2012 at Kabianga University College.
- Intensive distance Learning/ e-learning workshop organized by the institute of Open and Distance Learning (IODL) on 7<sup>th</sup> October 2011 at Africa Nazarene University.
- Research Proposal Writing Training Workshop on 16<sup>th</sup> and 17<sup>th</sup> September, 2011 by KDSA (Kenya DAAD Scholars Association) and NCSA (National Council of Science and Technology) at Moi University, Kenya.

**MOI UNIVERSITY (SCHOOL OF ARTS & BIOLOGICAL AND PHYSICAL SC.)**

**AUG 2010-JULY 2011:**

**Served as:** -Part-time Lecturer in Applied Mathematics.

**UNIVERSITY OF ELDORET (SCHOOL OF SCIENCE)**

**AUG 2010-JULY 2011:**

**Served as:** -Part-time Lecturer in Applied Mathematics.

**HERMANN GMEINER SECONDARY SCHOOL ELDORET**

**APRIL 2005 – SEPT 2011:**

**Served as:**

- Mathematics and Physics Teacher (F1-F4)
- Head of Mathematics and Science department.
- Christian Union patron.
- Science club patron.
- Guidance, counselling teacher and careers master.
- Inter-class cleanliness and conduct competition coordinator.
- HIV/AIDS focal person.

**Participated in**

- iEARN online Activities and Skills Training in ICT Integration in quality Education for Sustainable Development [ESD] held at Umoja Secondary School on 26<sup>th</sup> September 2009.
- District Secondary Schools Students’ Leaders Conference held on 21<sup>st</sup> March 2009 at AIC Chebisaas Boys’ High School with the theme “**Unity in diversity**”.
- Lifesaver International First Aid training course by St John Ambulance Kenya in November 2008 at Eldoret Station.
- 2nd cycle of SMASSE in service training for Mathematics and Science teachers.
- 3rd cycle of SMASSE in service training for Mathematics and Science teachers.
- HIV/AIDS Management for Lay-counsellors course by Foundation for Professional Development (South Africa) and on 19<sup>th</sup> to 21<sup>st</sup> October 2007.
- Learning Support, Guidance & Counseling Seminar on Stress and Crisis management held at Hermann Gmeiner School-Eldoret on 24<sup>th</sup> March 2007.
- Ministry of Education Science and Technology In Service course for Guidance and Counselling at Harambee Secondary School, Eldoret on 5<sup>th</sup> to 6<sup>th</sup> October 2006.

**Contributed to:**

- Improve performance and enrollment in Physics.
- Exemplary performance in enhancing high academic standards of the school.

**CHEBISAAS BOYS SECONDARY SCHOOL**

**SEPT. 2003 – MARCH 2005:**

**Served as:**

- Mathematics and Physics teacher (F1-F4)
- Guidance and Counselling Master, Dorm Master,
- Aids Awareness Club Patron.
- Class teacher.

**Participated in:**

- Peer Counselling/ Student Leadership in schools' training by Family Impact on 29<sup>th</sup> January 2005.
- Workshop on planning for performance improvement, strategic planning in schools, setting performance standards, performance appraisal reports
- 1st cycle of SMASSE in service training for Mathematics and Science teachers.
- Physics Society of Moi university workshop on "The doorway to the 21st century curriers"

**Contributed to:**

- Improve performance in KCSE 2004 physics exams to third position in Uasin Gishu district.
- Improve discipline in the school.

**ANTOLEX SEC. SCHOOL**

**JAN 2003 – AUG 2003:**

**Served as:**

- Mathematics, Physics and Chemistry teacher (F1)
- Head of science department

**KIPSOLU SEC. SCHOOL**

**MAY – JULY 2002:**

**Served as:** A trainee Mathematics and Physics teacher.

**KABIANGA BOYS' HIGH SCHOOL**

**MAY – JULY 2001:**

**Served as:** A trainee mathematics and physics teacher.

Dr. Morrice Oduor,  
University of Kabianga,  
Mathematics & Computer Science Dept,  
P.O Box 2030-20200,Kericho

**References**

Mobile +254 721 753 991  
Email: [morricearaka@yahoo.com](mailto:morricearaka@yahoo.com)

Prof. Jacob Bitok,  
University of Eldoret,  
Mathematics & Computer Science Dept,  
P. O. Box 1125-30100,  
Eldoret.  
Mobile +254 722 668 933  
Email: [jacobbitok@yahoo.com](mailto:jacobbitok@yahoo.com)

Mr. Daniel Adicka  
Head, Department of Mathematics,  
University of Kabianga,  
P.O Box 2030-20200,  
Kericho.  
Mobile: +254 724 379 013  
Email: [adikadaniel78@yahoo.com](mailto:adikadaniel78@yahoo.com)

Dr. M. Z. Mapelu,  
University of Eldoret,  
Physics Department,  
P. O. Box 1125-30100,  
Eldoret.  
Mobile +254 724 105 106  
Email: [mzmapelu@yahoo.com](mailto:mzmapelu@yahoo.com)