CURRICULUM VITAE

PERSONAL DETAILS

Name: Samuel Kipkoske Rotich, Ph.D

Contact Address: Physics Dept., Moi University, P. O. Box 3900 ELDORET.

Mobile phone: 0733-515276

Email address: samkrotich@mu.ac.ke
samkrotich@gmail.com,

Present position: Professor of Physics

ACADEMIC QUALIFICATIONS

1994-1998 PhD studies at Southampton University, UK. The title of my PhD thesis is *Micro-machined Silicon Solar Cells with Micro-optic Coupling Features on the Front Surface*. I successfully completed the research study and was awarded the Ph.D in December 1998.

1985-1987 M.Sc. studies in Electronics at Southampton University, UK and was awarded the MSc degree in March 1988

1979-1983 B.Ed (Science) degree at Kenyatta University College (then constituent college of Nairobi University), majoring in Physics and Maths. I graduated with First Class Hons in December 1983.
Won a Mobil Oil award for being the best Physics student.

1976-1979 Trained at Kenya Science Teachers College (KSTC), Nairobi as an S1 science teacher, majoring in Maths and Physics.

1972-1975 Secondary school education at Sigor secondary school, Bomet County
Sat for the EACE examinations in 1975 and passed in Division I

1965-1971 Primary School Education at Arokyet Primary School, Kericho County
Sat for CPE examinations in 1971 and passed

PROFESSIONAL TRAINING

2018 Attended Workshop on Research Leadership, Communication, Commercialisation, Partnerships and Collaboration organized by the Association of African Universities (AAU) held at New Fairmount Hotel, Livingstone, Zambia.

2017 Attended a Workshop on Leadership and Management organised by Moi University African Centre of Excellence (ACEII), held at Sirikwa hotel, Eldoret.

2009 Attended a ISO training courses/seminars organised by Moi University in preparation for ISO 9001-2008 Certification of Moi University

2005 Attended a course in Management in a Changing Environment organized by PERT International (Enterprise Development Consultants) held at Moi University

2005 Attended a Strategic Planning courses/seminars organised by Moi University. Programmed aimed at the development of Moi University Strategic plan 2005-2015

2003/2004 Participated in the establishment of Materials Science and Solar Energy Network for Eastern and Southern Africa (*MSSEESA*) and the development of its constitution, MOU and Strategic Plan for the participating institutions.

2002 Attended a training workshop on "Writing Competitive Research Grant Proposals" organised by Moi University, KEFRI, ICRAF, IFS, AFORNET and DFID

1992: Attended a management course on personnel management, resource planning, Quality Assurance and Time Management at KCCT, Mbagathi, Nairobi.

1991: At Kenya College of Communications Technology (KCCT), Nairobi, I did a JICA sponsored equipment course in the field of Digital Microwave Engineering and had case studies of the microwave links in Kenya.

1990: Management training in Production, Telecoms systems test, Quality assurance, Materials planning, Personnel management, and Time management at Telectron facility in Ireland. Completed a First Aid course offered by the Red Cross.

1976-1978: While at KSTC as a student teacher I underwent training on institutional management and topics covered included students and staff interactions, financial management, resource recycling and environmental conservation, discipline and information management

WORK EXPERIENCE

August 2014 to July2017 Director, Kericho Satellite Campus of Moi University

July 2012 to date Professor of Physics, Moi University

- PSSP coordinator for the school of Biological and Physical Sciences
- Chairman, School Graduate Studies Committee
- I do research in the fields of electronics, renewable energy, theoretical physics and material science.

- Current duties include teaching, supervision and examination of both undergraduate and postgraduate students in the department. I have examined a good number of M.Sc and D.Phil/PhD theses.

2008 to July2012 Associate professor and Head of Physics department

Duties and Responsibilities

Responsibilities that I held in the department or school were:

(a) Coordinated departmental activities such as course allocation, training, team building, university policy implementation, and assignment of duties to all staff.
(b) Chairing of departmental meetings, attended senate/college meetings and was a conduit of information between the departmental staff and higher authorities
(c) Managed income generating unit in the department
(d) Chairman for the Physics department, Graduate Studies Committee
(e) Chair departmental appointments committee and curriculum review meetings.
(f) Chief Examiner of Physics department.
(g) Chairman of the Public Complaints Committee for the then Chepkoilel University College.
(h) Participated in school board meetings and assisted the dean occasionally in the running of the school in an acting capacity.

2002-2008 Senior lecturer and Head of department of Physics.

1993-2002 Lecturer in the department of Physics. Taught and supervised BSc and MPhil students in the department

1995-1998: PhD student and was able to offer tutorial classes to BSc students taking electronics courses at the University of Southampton.

March 1989-April 1990: Joined the Physics Dept. at Moi University as a tutorial fellow. I taught undergraduate courses in Physics

CURRICULUM DEVELOPMENT

1) Participant in the Curriculum Development Stakeholders workshop for the Science programmes for Karatina University held on 20th January 2022.

2) Provided leadership in the development of the PhD and MSc Physics curricula for Moi University. It was sponsored by the African Centre of Excellence II (ACEII) and the curriculum was approved by CUE in 2022

3) Participant in the Curriculum Development Stakeholders workshop for the Science programmes for University of Kabianga, held at Tea Research Institute, Kericho, on 9th-12th February 2016

4) Participated in the Curriculum planning and development workshop for the OPEN UNIVERSITY of Kenya held at Multimedia University, Nairobi, on 23rd to 25th July 2014, Sponsored by the Ministry of Education, Science and Technology (MOHEST)

5) Lead expert in the Development of Curriculum for science disciplines for the Garissa University College in Garissa on 26th May 2014 to 31st May, 2014 and on 30th June 2014 to 5th July 2014

6) Participant in the PAN-AFRICAN University stakeholders' curriculum validation meeting held in Addis Ababa, Ethiopia, on 14th to 18th November, 2011. Sponsored by the African Union

7) Participated in the Curriculum planning and development workshop for the OPEN UNIVERSITY of Kenya held at Multimedia University, Nairobi, on 9th to 11th December 2013, Sponsored by the Ministry of Education, Science and Technology (MOHEST)

EXTERNAL EXAMINATION WORK

2021-2024 External examiner of Physics for Egerton University.

2020-2023 External examiner of Physics for Karatina University.

2015–2021 External examiner of Physics for University of Kabianga

2011-2024 External examiner of Physics for Jomo Kenyatta University of Agriculture and Technology (JKUAT)

2012–2015 External examiner of Physics for Kenyatta University (KU)

2012-2021 External examiner of Physics for Kibabii University.

PUBLICATIONS AND PRESENTATIONS

1) Mang'are, P. A., Ndiritu, F. G., **Rotich, S. K.**, Makatiani, J. K., Rapando, B. W. (2020). Optimal Protection Index in Malaria Vector Host Elicited by the 10-34 kHz Animal Sounds. *American Research Journal of Physics*, 6(1):1-29. DOI: 0.21694/2380-5714.20002

2) Kanule, J., Ng'etich, W., & Rotich, S. (2019). Computational and experimental study of a hydro-dynamical landslide model based on laboratory flume tests. IOP Publishing: *Environ. Res. Commun*. 1 (2019) 125003. https://doi.org/10.1088/2515-7620/ab50f6.

3) Mang'are, P. A., Ndiritu, F. G., **Rotich, S. K.**, Makatiani, J. K., Rapando, B. W. (2019). Comparative Characterization of the Natural Sounds of the Bottlenose Dolphin *Tursiops truncatus* and *Odorrana tormota* Fundamental in the Startle of the Female *Anopheles gambiae*, *International Journal of Biophysics*, 9(1): 12-21, DOI: 10.5923/j.biophysics.20190901.02

4) Kusimba, S., Tonui, J. K. & **Rotich, S. K**. (2019). Modelling and optimization of subthreshold leakage current in Low-Power, Silicon-Based, Complementary Metal Oxide Semiconductor (CMOS) Devices, *International Journal of Engineering Applied Sciences and Technology*, Vol. 4, Issue 6, pp270-277, ISSN No. 2455-2143

5) Yegon, G. K., Waswa, D. W., Isoe, G. M., Arusei, G. K.,, **Rotich, K. S**., Tim G. B., & Leitch (2019). A. 20 G bps Pulse Amplitude Modulation (PAM) Format for Capacity Upgrade in Optical Communications. *American Journal of Optics and Photonics*, 7(2): 41-45, doi: 10.11648/j.ajop.20190702.13

6) Yegon, G. K., Isoe, G. M., & Rotich, S. K. (2019, October). Signal Transmission Performance at 1550nm Using Directly Modulated VCSEL over G. 652 and G. 655 fiber links. In *Proceedings of Sustainable Research and Innovation Conference* (pp. 178-184).

7) Kanule, J., Ng'etich, W., & Rotich, S. (2019). Computational and experimental study of a hydro-dynamical landslide model based on laboratory flume tests. *Environmental Research Communications*, *1*(12), 125003.

8) Yegon, G. K., Waswa, D. W., Isoe, G.M., **Rotich, S. K.**, Gibbon, T. B., Gamatham, R. R. G. & Leitch, A.W.R. (2019). Signal transmission performance at 1550nm over different fiber links. *International Journal of Advanced Research*, 7(8), 973-977. Doi:10.21474/IJAR01/9586

9) Ronno, C., Makau, N., Amolo, G., & **Rotich, S**. (2017). Estimation of Global Radiation using Clear-Sky Model at Selected Sites in Kenya. *African Journal of Education, Science and Technology*, *3*(4), 97-103.

10) Koech, W., **Rotich**, S., Rotich, T., Nyamwala, F. (2016). Parameter Estimation of a DC Motor-Gear-Alternator (MGA) System via Step Response Methodology. *American Journal of Applied Mathematics*, Vol. 4, No. 5, pp. 252-257. doi:10.11648/j.ajam.20160405.17

11) Ondieki, H. O., Koech, R. K., Tonui, J. K., **Rotich, S. K**. (2014). Mathematical Modelling Of Solar Air Collector With A Trapezoidal Corrugated Absorber Plate. *International Journal of Scientific & Technology Research*, Volume 3, Issue 8, ISSN 2277-8616, www.ijstr.org

12) Choge, D. K., **Rotich**, **S. K.,** and Tonui, J. K. (2013). Small Wind Turbines: A Simulation for Optimal Selection in Uasin-Gishu, Kenya. *The Pacific Journal of Science and Technology (PJST)*, Vol. 14. No. 2.

13) Arusei, G. K., Yegon, G. K., **Rotich**, **S. K.,** Ronoh, N. K.,. Koech, R..K. and Choge, D.K. (2013). Elastic Scattering Reaction of on Partial Wave Scattering Matrix, Differential Cross-Section and Reaction Cross-Section at Laboratory Energies of 5-15 MeV: An Optical Model Analysis. *Advances in Physics Theories and Applications, International Institute for Science, Technology and Education (IISTE)* ISSN 2224-719X (Paper) ISSN 2225-0638 (Online) Vol.23, www.iiste.org

14) Koech, R. K., Ondieki, H. O., Tonui, J. K., and **Rotich, S. K**. (2012). A Steady State Thermal Model for Photovoltaic/Thermal (PV/T) System Under Various Condition. *International Journal of Scientific & Technology Research*, Volume 1, Issue 11, ISSN 2277-8616, www.ijstr.org

15) Khanna, K. M., Chelimo, S. L., Torongey, P. K. and **Rotich, S. K**. (2012). Superfluidity of crystalline supersolid ^{4}He under high external pressure. *The African Review of Physics*, **7**:0012.

16) Tonui, J. K., Tanui, P. K., Maritim, J. K., **Rotich, S. K.**, and Torongey, P. K. (2011). Assessment of Solar Thermal Potential as a Source of Energy for Drying Applications. *East African Journal of Pure and Applied Sciences* (*EAJPAS),* Vol.II no 2.

17) Khanna, K. M., Kanyeki, G. F., **Rotich**, **S. K.,** P. K. Torongey and Ameka, S. E. (2010). Anharmonic perturbation of neutron-proton pairs by the unpaired neutrons in heavy finite nuclei. *Indian Journal of Pure and Applied Physics*, Vol. 48, pp7-15.

18) Tonui, J. K., **Rotich**, **S. K.,** Maritim, J. K. and Tanui, P. K. (2010). Experimental Investigation on the Performance of a Prototype Solar Air Heater for Drying Applications. *Kenya Science, Technology and Innovation Journal,* ISSN 2079-5440, Vol.1, p28.

19) Torongey, P. K., Khanna, K. M., Ayodo, Y. K., Sakwa, W. T., Kanyeki, F. G., Ekai, R. T., Kimengichi, R. N. and **Rotich**, **S.** (2010). Elastic scattering of ^{4}He atoms at the surface of liquid Helium. *Indian Journal of Pure and Applied Physics*, Vol. 48, pp743-748.

20) Khanna, K. M., Ayodo, Y. K., Sakwa, W. T., **Rotich, S. K.,** Torongey, P. K. and Mbugua, W. S. (2009). Pair distribution function for interacting bosons and the ground-state energy of solid ^{4}He. *Indian Journal of Pure and Applied Physics*, Vol. 47, pp325-331.

21) Khanna, K. M., Ekai, R., Ronno, C. K., **Rotich, S. K.** and Torongey, P. K. (2005). Theory of Multilayer solar Cells. *Indian Journal of Pure and Applied Physics*, Vol. 43, pp432-438.

22) Sakwa, W. T., Khanna, K. M., Mueni, M., **Rotich, S. K.** and Torongey, P. K. (2004) Transition Temperature for ^{4}He liquid adsorbed in disordered media. *Indian Journal of Pure and Applied Physics*, Vol. 42, pp351-354, 2004

23) Sakwa, W. T., Khanna, K. M., Mueni, M., **Rotich, S. K.** and Torongey, P. K. (2004). Four Level approximation in disordered medium. *Indian Journal of Pure and Applied Physics*, Vol. 42, 355-360.

24) Khanna, M., arap Kirui, M. S., Sakwa, T. W., Torongey, P. K., Ayodo, K. Y. and **Rotich, S.** (2004). Correlation amplitude for quasi-particles in High T_c superconductors. *Indian Journal of Pure and Applied Physics,* Vol. 42, pp758-763.

25) **Rotich, S.,** Smith, J. G., Evans, A. G. R. and Brunnschweiler, A. (1998). Photoresist micro- parabolas for beam steering. *Proc. SPIE 3287, Photodetectors: Materials and Devices III*, pp349-356; doi:10.1117/12.304502

26) **S.Rotich,** J.G.Smith, A.G.R.Evans and A.Brunnschweiler, (1998). *Characterisation of the micromachined thin solar cells with a novel light trapping scheme*. Journal of Micromechanics and Microengineering, Volume 8, Issue 2, pp. 134-137, doi:10.1088/0960-1317/8/2/022

27) **Rotich, S.,** Smith, J. G., Evans, A. G. R. and Brunnschweiler, A. (1997). Photoresist micro-parabolas. IEE(MCIG) Colloquium on *Microengineering in Optoelectronics* Ipswich, UK, July 1, 1997.

28) **Rotich, S.,** Smith, J.G., Evans, A. G. R. and Brunnschweiler, A. (1997). Simple novel technique for making microparabolic reflectors. IEE Colloquium (Digest) on *Recent Advances in Micromachining Techniques*, (Digest No: 1997/081), 1997, pp. 3/1-3/3, doi: 10.1049/ic:19970464.

29) **S.Rotich,** J.G.Smith, A.G.R.Evans and A.Brunnschweiler, (1998). Micromachined thin solar cells with a novel light trapping scheme. *Journal of Micromechnics and Microengineering*, Vol. 8, pp 134-137; work was also presented at *Micromechanics Europe* 1997, pp144-147.

30) **S.Rotich,** J.G.Smith, A.G.R.Evans and A.Brunnschweiler, (1998). Photoresist micro-parabolas for curved micromirrors. *Journal of mechanics and Microengineering*, Vol. 8, pp 108-110; work was also presented at *Micromechanics Europe 1997*, pp87-90.

PAPERS PRESENTED IN CONFERENCES

1 S.K Rotich, D.K Choge and J.K Tonui, "*Wind power analysis and site matching of small wind turbine generators"* Moi University, Eldoret, Kenya, 6th Annual International Conference, August 7th – 9th September 2010

2 J.K Tonui, P.K Tanui, J.K Maritim, S.K Rotich and P.K Torongey, "*Assessment of solar thermal energy potential as a source of energy for drying applications*" Moi University, 5th Annual International Conference, 4th-8th August, 2009, Eldoret, Kenya

3 S. K. Rotich, P. K. Talam and J.K.Tonui, "Enhancing TV signal selectivity in fringe areas", Moi University, 5th Annual International Conference, 4th-8th August, 2009, Eldoret, Kenya

4 K.M. Khanna and S.K. Rotich, "*How can Africans become active participants in the process of Globalization?"* ,Africa, Globalisation and Justice International Conference, Catholic University of Eastern Africa, 17th-19th May, 2006

5 K.M. Khanna and S.K.Rotich, P K Torongey "*Role of Science and in Science Role of Physics, on Sustainable Development*", Moi University, Eldoret, Kenya, 2nd Annual International Conference, August 29th – 2nd September 2006

6 K.M. Khanna, S.K. Rotich, Anil Kumar, "*Superconductivity and Future Power Plants*", Moi University, 2nd Annual International Conference, August 29th – 2nd September 2006, Eldoret, Kenya

7 K.M. Khanna, S.K. Rotich, P.K. Torongey, "*New Materials for Sustainable Development*", Moi University, 2nd Annual International Conference, August 29th – 2nd September 2006, Eldoret, Kenya

CONFERENCES/WORKSHOPS/SEMINARS PARTICIPATED IN OR ATTENDED

1) Workshop on Research Leadership, Communication, Commercialisation, Partnerships and Collaboration organized by the Association of African Universities (AAU) held at New Fairmount Hotel, Livingstone, Zambia, from 10th to 14th September, 2018

2) Workshop on Leadership and Management organised by Moi University African Centre of Excellence (ACEII), held at Sirikwa hotel, Eldoret, on 16th-17th October 2017

3) Campus-wide Research workshop held at Moi Univeristy on Friday 28th April 2006, Wednesday 3rd, 2006 and Friday 19th May 2006

4) Was guest speaker during the annual I.T. conference organized by Computer Society of Moi University, Chepkoilel Campus, on 12th June 2014

5) Attended an Executive Development Course at the then KPTC's Central Training School, Mbagathi on 23rd March 1992 to 30th March 1992.

6) Attended a Management Training programme at Training and Employment Authority of Ireland in 1990. Sponsored by AT&T.

7) Did a Digital Microwave Engineering course the then KPTC's Central Training School, Mbagathi on 16th September 1991 to 15th November 1991. Sponsored by JICA

THESES SUPERVISED

1 Investigation of the Acoustic Propagation Parameters and Startle Response of the African Female *Anopheles Gambiae* for the design of a mosquito repellent device. PhD thesis by Mang'are Philip Amuyunzu, SD13/23549/14. Egerton University. Graduated 2021

2 Hydromechanical Slope Stability Analysis: Modelling, Monitoring and Prediction using BB-FF- Artificial Neural Networks. PhD thesis by Kanule M. B. Jason, SC/D.PHIL/020/08. University of Eldoret. Graduated 2021

3 Optical Signal Transmission in new generation fibres using Advanced Modulation Formats and VCSEL Transmitter. PhD thesis by Geoffrey Kipkoech Yegon. SC/PHD/P/035/12. Graduated 2020

4 Modeling and simulation of the Motor-Gear-Alternator models to amplify the usability of the solar energy for commercial and domestic use. PhD thesis by Wesley Cheruiyot Koech, PhD/AM/02/14. Graduated 2018

5 "Intrinsic Photon in a Crystal", MSc thesis by Richard Kipsang Rotich, (SC/PGP/03/04). Graduated 2015

6 "Quantum Hard-Sphere Boson Assembly of Crystalline ${}^{4}_{2}He$ and Crystallization of ${}^{7}_{3}Li$, ${}^{40}_{18}Ar$ and ${}^{87}_{37}Rb$ in a Magneto-Optical trap". PhD thesis by Mbugua Skitter Wangechi, (SC/D.PHIL/07/08). Graduated 2014

7 "Application of Some Models to Estimate Global & Diffuse Solar Radiation at Selected Sites in Kenya" PhD thesis by Cosmas Kipkurgat Ronno. Graduated 2013

8 "Effects of temperature of frequency response of MOSFETs", MSc thesis by Paul K Kibet, SC/PGP/16/05, Graduated 2013

9 "A parametric study of a thermosiphon photovoltaic/thermal (PV/T) air system", MSc thesis by Kipyegon Koech Richard, SC/PGP/02/09, Graduated 2012

10 "Physical properties of high temperature cuprates based on interlayer and intralayer interactions", MSc thesis by Francis Kipkirui Sigei, SC/PGP/07/09, Graduated 2012

11 "Wind power analysis and site matching of small wind turbine generators in Eldoret, Kenya", MSc thesis by D.K Choge, SC/PGP/12/07 Graduated 2011

12 "A proto-type solar air thermal collector", MSc thesis by Joseph Kiprotich Maritim, SC/PGP/12/06, Graduated in 2010

13 "Consideration on mechanism of superconductivity", MSc thesis by Tanui Peter Kiprotich, SC/PGP/10/07 Graduated 2010.

14 "The algebra of coupled electrons in superconductivity", MScl Thesis by Murunga Godfrey , SC/PGP/08/07, Graduated 2010

15 "Optical Model Analysis of $^{7}Li+^{7}Li$ Nuclear Elastic Scattering reaction in the energies E= 9, 11, 13, 14 and 16 MeV", MSc thesis by Korir Peter Cheruiyot SC/PGP/03/05, Graduated 2010

16 "Theoretical characterisation of a 15x parabolic trough concentrator photovoltaic (PT/PV) system for equitorial latitudes", MSc thesis by Kosgei Richard Kipkoech. Graduated in 2008

17 "Improving tv signal selectivity by using a MOSFET TV tuner pre-amplifier", MPhil thesis by Philip Kangogo Talam, SC/PGP/05/05. Graduated in 2008

18 "Specific heat jump in high - T_C superconductors", MPhil Thesis by Philip W Otieno, (SC/PGP/04/02), Graduated in 2007

19 "The design and development of a wakeup alarm for the deaf students", MPhil Thesis by Tonui Patrick, (SC/PGP/02/04), Graduated in 2007

20 "A method of measurement of resistivity of semiconductors and thin films and the design by simulation of a four point probe circuitry:", MSc Thesis by Kennedy M Muguro, (SC/PGP/10/93). Graduated 2003

THESES EXAMINED

1 "Design and Analysis of Microstrip Antenna for 2.4GHZ Applications" M.Sc Thesis by Magare Aondo Douglas, (I56/27970/2014), Kenyatta University, 2019

2 "Design and Fabrication of an Autonomous Line Follower Robot Capable of Picking And Dropping Object From One Point to Another", M.Sc Thesis by Majau A Mugure, (I56/24240/2013), Kenyatta University, 2018

3 "*Design and Construction of a Microcontroller-Based Five Degree of Freedom Robotic Arm Using Servo Motors",* M.Sc Thesis by Ndwiga Nicholus Kariuki, (I56/CE/28336/2013), Kenyatta University 2017.

4 "Effects of Crusting Operations and *Aloe Barbadensis Miller* Mixed with Carrageenan on the Physical, Structural And Chemical Properties and on the formation of

Hexavalent Chromium in Post Tanned Leather Crusts " PhD Thesis by Kallen Mulilo Nalyanya (SD13/14698/15), Egerton University, 2019

5 "Modelling Optimality of Experimental Designs Under the Influence of Neighbourhoodliness", PhD thesis by Robert Kipchumba Too (SC/DPHIL/15/05), Moi University, Graduated 2014

6 "Optimal Designs for Second Order Rotatability", PhD thesis by Silver Jeptoo Keny Rambaei (SC/DPHIL/25/08), Moi University, Graduated 2014

7 "*Isolation and Identification of Microbes in the Degradation of Some Common Herbicides Used in Sugarcane Fields in Kenya*"**,** D.Phil. thesis By Ngigi Anastasiah (SC/D.Phil/C/02/06), Graduated 2011

8 *"K-Diensional Third Order Rotatable Designs Through Balanced Incomplete Block Designs"***,** Mphil Thesis by Charles Kipkoech Mutai (SC/PGM/015/09), Graduated 2011

9 *"The Vibrating Membrane Problem:- A Mathematical Model For Separation Process"* MPhil Thesis by Nixon K Rono (SC/PGM/08/07), Graduated 2010

10 "*A Speciation Study of Selected Heavy Metals In The Chemelil Sugar Company Waste Water*"**,** MPhil thesis by Omondi Edgar Abuto, SC/PGC/017/2006, Graduated 2010

11 "*The Boundary Element Solution Of A Slow Viscousflow: The Free Surface Problem*", MPhil thesis by Kandie Joseph Kipchirchir (SC/PGM/12/06), Graduated 2010

12 "*Optimality Criteria For Second-Degree Kronecker Model Mixture Experiments With Two, Three, and Four Ingredients*" MPhil thesis by Ngigi Peter Kung'u (SC/PGM/07/06), Graduated 2010

13 "*Automation of Heat Transfer and Vapour Low-Rate in the Thin Film Deposition of Tin Oxide using the Atmospheric Chemical Vapour Deposition Technique* ", MPhil Thesis by Makateto, George Martin Ochieng (EDU/PGT/05/02), Graduated 2008

14 "*Ultrasonic Studies In Aqueous (Dilute) Solutions Of Sodium Hydroxide (NaOH) and Potassium Hydroxide (KOH)* " MPhil thesis by Murei Kiptum Gilbert, (SC/PGP/010/2004), Graduated 2007

15 "*Anharmonic Perturbation of the Neutron-Proton Pairs by the Unpaired Neutrons* "MPhil Thesis by Soita Elisha Ameka, **(**SC/PGP/03/2003), Graduated 2007

16 "Pair Distribution Function (PDF) Interacting Boson and Ground State Energy of Solid ^4He " MPhil Thesis by Wangeci Skitter Mbugua, (SC/PGP/013/2004), Graduated 2007

17 "*Empirical Modelling of the Effects on Non-Uniform Illumination on the Output Characteristics of a Photocell in a Compound Parabolic Concentrator (CPC) Cavity* ", MPhil thesis by Kanule M. B. Jason, (SC/PGP/03/2003), Graduated 2007

18 "*Some Results on Differential Equations In Locally Convex Spaces and Symmetry Groups"* Mphil Thesis By Jackson Kiplagat Cherutoi, (SC/PGM/03/2002), Graduated 2005

19 "*The Parametric Analysis And Modelling of a Low-Concentrating Compound Parabolic Concentrator Photovoltaic System*", Mphil Thesis by Charles Muchunku, (SC/PGP/01/2000), Graduated 2003

20 "*The Preparation and Characterisationo* SnO_X*: F/*Al_2O_3*/Al Spectrally Selective Reflector Surfaces For Solar Concentrator Applications*" Dphil Thesis By Mghendi Maurice, Mwamburi **(**SC/D.Phil/03/97), graduated 2003

21 "*Synthesis and Charaterization of Zinc (Ii) and Copper (Ii) Complexes of Embelin*", Mphil Thesis By Jackson Kiplagat Cherutoi (SC/PGC/01/98), Graduated 2002

22 "*Computed Aided Temperature Controller for a Brooder*" MPhil thesis, by Kipchumba Kogo Julius (SC/PGP/26/96), Graduated 2002

23 "*Density Dependent Effective Nucleon-Nucleon Interaction and Nuclear Matter Studies*", DPhil Thesis by Charles Opaka Matiasi, (SC/D.Phil/22/98), Graduated 2002

24 "*Fabrication and Investigation of Photoluminescence Properties of Porous Silicon Layers*", DPhil thesis by Mbugua Zakayo, (SC/D.Phil/01/97), Graduated 2002

MEMBERSHIP TO PROFESSIONAL ORGANISTIONS

1. Member of Biophysical Society of Kenya as from 2018
2. Member of Kenya Physical Society, National Office at Department of Physics, University of Nairobi
3. Member of IOP (Institution of Physics) UK. Student membership number 5777 of 1998
4. Member of Moi University Alumna Association

RESEARCH GRANTS

1. Kshs 120,000/= award from the National research fund grants, 2016, in support of the PhD thesis of Wesley Cheruiyot Koech, (PhD/AM/02/14)

2. Kshs 200,000/= awarded by VLIR-MOI university IUC programme in 2015 for research project on Water Quality Assessment Survey in River Nyando in the Vicinity of Muhoroni Sugar Factory. To support Richard Koech research

3. Kshs 1.2million from NCST (National Council of Science and Technology), offered in May 2010 for research on "Prediction and Monitoring of Mass Movement in North Western Kenya Highlands". To support PhD research work by Jason Kanule

4. Kshs 190,000 from Moi University GSREC Research fund in 2008 for research on "Assessment of Wind Energy Potential in Uasin Gishu District", To support MPhil work by Omwaka

INSTITUTIONAL LINKAGES INITIATED WHILE I WAS HEAD OF THE DEPARTMENT OF PHYSICS

1. Active resource person in the development and implementation of the programmes in the Africa Center of Excellence II in Phytochemcals, Textiles and Renewable Energy (ACEII-PTRE) which is based in Moi University. It is a World Bank sponsored project running from 2016.

2. International Centre for Theoretical Physics (ICTP) in Italy. Started in 1999 and has given the department support in seminars, workshops and postgraduate and technical training. The department has benefited from staff visits to ICTP

3. University of Witzwatersrand, Johannesburg , South Africa. Supports staff training on MSc and PhD since 2003

4. The Nelson Mandela Metropolitan University, Port Elizabeth, South Africa. Supports staff training on MSc and PhD since 2003

5. The National Laser Centre, Commission for Science and Industrial Research (CSIR) and African Laser Centre, Pretoria , South Africa. Supports staff training on MSc and PhD since 2006

REFEREEES:

1. Dr Rose Ramkat, Dean, School Sciences and Aerospace Studies, Moi University, P.O.Box 3900 ELDORET.

2. Prof. Isaac Kimengi , Deputy Vice-Chancellor (A.R.&E.), Moi University, P.O.Box 3900 ELDORET.

3. Prof. Ambrose Kiprop, Centre Leader, ACE11 Project, Moi University, P.O.Box 3900 ELDORET.

Signed:…  ……

Prof Samuel K Rotich