

CONTACT
INFORMATION

P.O. Box 73566- 00200
Nairobi, Kenya

0722 502 917/0747 502 917
asiyo.mike@ku.ac.ke

RESEARCH
INTERESTS

Wireless Systems, Power Line Communications (PLCs), Intelligent Reflective Surfaces and Resource Allocation Algorithms.

EDUCATION

University of KwaZulu Natal, South Africa

Ph.D. (Electronic Engineering), *April 2017*

- Thesis Topic: Multiscalling Analysis and Modelling of Bursty Impulsive Noise in Broadband Power Line Communication Channels
- Advisor: Prof. TJO Afullo

University of KwaZulu Natal, South Africa

MScEng. (Electronic Engineering), *April 2013*

- Thesis Topic: Characterization and Modelling of Effects of Clear Air on Multipath Fading in Terrestrial Links
- *Cum Laude*
- Advisor: Prof. TJO Afullo

Moi University

BTech (Electrical & Communications Engineering), *Dec 2009*

- Second Class Honours - Upper Division

Jomo Kenyatta University of Agriculture & Technology

Diploma (Electrical Engineering), *April 2000*

- Credit

PROFESSIONAL
EXPERIENCE

Chairperson (EEE) - Kenyatta University

(June 2026 to Date)

- In charge of all administration duties and academic programs in the Department of Electrical & Electronic Engineering.

Lecturer - Kenyatta University

(Nov 2020 to Date)

- Teaching, research and advancement of knowledge at undergraduate programmes
- Initiation and development of academic programmes
- Participation in curriculum development and examinations

Courses Taught:

1. *Undergraduate:* Electromagnetic Fields, Circuit Theory I, Digital Image Processing, Microwave Engineering, Complex Analysis for Electrical Engineers.

Exams Coordinator (EEE) - Kenyatta University

(Oct 2023 to Oct 2025)

- In charge of all examination administration duties in the Department of Electrical & Electronic Engineering.

Other Responsibilities - Kenyatta University

- Departmental Industrial Attachment Coordinator (2021-2023)
- Chairperson, Curriculum & Review Committee (EEE) (2021-2023)
- Member, School of Engineering & Architecture Curriculum & Review Committee.
- Chairperson, School of Engineering & Architecture Board of Postgraduate Studies.

Lecturer - Technical University of Mombasa

(Sep 2017 to Oct 2020)

- Teaching, research and advancement of knowledge at both undergraduate and postgraduate programmes
- Initiation and development of academic programmes
- Participation in curriculum development and examinations

Courses Taught:

1. *Undergraduate:* Electromagnetics I & II, Electroacoustics, Antenna & Propagation, Microwave Engineering, Digital Communications, Digital Signal Processing, Digital Filters, Circuit & Network Theory
2. *Postgraduate:* Microprocessor & DSP Applications, Energy Storage Systems.

Assistant Lecturer - Technical University of Mombasa (Sep 2014 to Aug 2017)

- Teaching, research and advancement of knowledge at undergraduate programmes
- Initiation and development of academic programmes
- Participation in curriculum development and examinations

Courses Taught: Electrical Principles, Electronic Design, Field Theory.

Teaching Assistant - Technical University of Mombasa

(April 2010 to Aug 2014)

- Provision of lectures and tutorials
- Undertaking research and advancement of knowledge
- Participation in curriculum development and examinations

Courses Taught: Electrical Principles, Digital Signal Processing, Analogue Electronics I & II, Electrical Machines I & II.

Part-Time Lecturer - Machakos University

(Sep 2023 to Date)**Courses Taught:**

1. *Undergraduate:* Antenna & Propagation, Analogue Electronics III, Microprocessor Systems & Applications, Digital Electronics II

Part-Time Lecturer - Murang'a University of Technology (Sep 2021 to Aug 2022)

Courses Taught:

1. *Undergraduate:* Signals & Systems, Electromagnetic Waves, Electromagnetic Fields,

Digital Communication Systems, Communication Systems I & II Circuit & Network Theory , Control Engineering I, Control I (Applied Physics), Control II (Applied Physics)

2. *Postgraduate*: Digital Communications

Technologist - University of Nairobi

(May 2004–Mar 2010)

- Arrange for practicals for both undergraduate and postgraduate students, guiding the students and ensuring that laboratory procedures are adhered to and all safety precautions in place
- Maintenance and servicing of laboratory equipment
- In consultation with the Chief Technologist procure materials and equipment for laboratory services

Technical Sales Rep. - Baumann Engineering Ltd

(Nov 2001–April 2004)

- Direct sales of generators, water pumps, motors, construction equipment, solar system units, motor controls, power transmission equipment and electric fencing materials
- Installation and after sales servicing of generators, water pumps and electrical fence
- Visit electrical and mechanical consultants to tap business for our products, giving quotations, completing tenders and following them to convert them into sales

Sales Engineer - Power Technics Ltd

(May 2000–Oct 2001)

- Direct sales of industrial controls and protective devices: ACBs, MCCBs, MCBs, variable speed drives, magnetic control relays, power factor correction banks, phase failure relays, meters, inductive sensors and light fittings
- Provide advice and highlight customers on company products
- Wiring and testing of control panels, motor starters, changeover units, liquid level control units, consumer units and switchboards

ARTICLE
PUBLICATIONS

- Jackson Mwalali , Nicholas Oyie and M.O. Asiyio, “Effects of Antenna Orientation on Line of Sight Radio Channel for Microwave Links” *15th Biennial International Conference*, 18th - 21st March, 2024, Egerton, Kenya.
- M.O. Asiyio and T.J. Afullo, “Analysis of Bursty Impulsive Noise in Low-Voltage Indoor Power Line Communication Channels: Local Scaling Behaviour.” *SAIEE African Research Journal*, vol. 108 (3), pp. 98–107, 2017.
- M.O. Asiyio and T.J. Afullo, “Multifractal analysis of bursty impulsive noise in low voltage indoor power line channels.” *Southern Africa Telecommunications and Applications Conference (SATNAC)*, George, South Africa, Sep 2016.
- M.O. Asiyio and T.J. Afullo, “Prediction of long-range dependence in cyclostationary noise in low-voltage PLC networks.” *Symposium of Progress in Electromagnetic Research*, Shanghai, China, Aug 2016.
- M.O. Asiyio and T.J. Afullo, “Power line communications channel multipath phenomena and RMS delay spread.” *Southern Africa Telecommunications and Applications Conference (SATNAC)*, Western Cape, South Africa, Sep 2015.
- M.O. Asiyio and T.J. Afullo, “Statistical estimation of fade depth and outage predictions due to multipath propagation in Southern Africa.” *Progress in Electromagnetic Research (PIER B)*, vol. 46, pp. 251–274, 2013.

- M.O. Asiyo and T.J. Afullo, “Spatial interpolation techniques for mapping geoclimatic factor K in South Africa.” *Symposium of Progress in Electromagnetic Research(PIERS)*, Taipei, Taiwan, Mar 2013.
- M.O. Asiyo and T.J. Afullo, “Tropospheric propagation mechanisms influencing multipath fading based on local measurements” *Southern Africa Telecommunications and Applications Conference (SATNAC)*, George, South Africa, Sep 2012.

POSTGRADUATE
SUPERVISION

- Kyarisiima Addah - PhD Student, “*Modelling and characterization of powerline noise in indoor Powerline Communication applications.*”, University of Nairobi (Ongoing)
- Abdimalik Mohamed, Masters Student, “*Design & Performance Analysis of a Deep Reinforcement Learning Based Adaptive Beamforming Framework for Energy Efficient Massive MIMO in 6G Networks*”, Pan African University Institute for Basic Sciences, technology and Innovation (PAUSTI), (Ongoing)
- Anne Cheloti - Masters Student, “*Optimizing Transient Response in Grid-Tied Inverters Through Adaptive AI-Driven Control Mechanism*”, Kenyatta University (Ongoing)
- Jackson Mwalali - Masters Student, “*Design of Active Dual Polarized Antennas at Microwave Frequencies*”, Muranga University of Technology (Ongoing)
- Jonah King’oo Ndunda -Masters Student, “*Modelling of Effective Earth Radius Factor for Microwave Links Design in Kenya*”, University of Nairobi (Ongoing)

POSTGRADUATE
THESIS
EXAMINATION

- Maleve Aaron Mutua - MSc Thesis, “*Optimization of Biogas Production During Co- Digestion of Cow Dung, Sisal Waste and Chicken Litter*”, Department of Energy, Kenyatta University, 2026
- Kadiatou Balde - MSc Thesis, “*An Improved PTS Scheme Based on Hybrid GA-PSO for PAPR Reduction in OFDM Systems*”, Pan African University Institute for Basic Sciences, technology and Innovation (PAUSTI), 2026
- Philemon Yegon - PhD Thesis, “*Virtual Synchronous Machine Control Strategies in Low Inertia Micro-Grid*”, Delhi Technical University, India, 2025
- Christian Vianney Leonel Tromo Aguoda - MSc Thesis, “*Enhancing Spectrum Sharing With Real-Time Traffic Pattern Recognition Using Gated Recurrent Unit*”, Pan African University Institute for Basic Sciences, technology and Innovation (PAUSTI), 2025
- Adamu Hassan Ojodale -MSc Thesis, “*Significance of Maximum Power Point Tracking of Performance of Solar PV Modules Under High - Temperature Field Conditions*”, Department of Energy, Kenyatta University, 2025
- Aigbedion Nosakhare Jeremeiah -MSc Thesis, “*Experimental Numerical Study on Roof-Top Solar PV Performance under Different Roofing Materials & Air Gaps in Tropical Climates*”, Department of Energy, Kenyatta University, 2024

- Ayora Emmanuel -MSc Thesis, “*Performance Evaluation and Optimization of Grid Tied Solar Photovoltaic Systems: A Case Study of Strathmore University 600 kWp Solar Plant*”, Department of Energy, Kenyatta University, 2024
- Macben Mackenzie Mutua -PhD Thesis, “*Maximization of Site Specific Solar Photovoltaic Energy Generation for Water Pumping & Domestic Energy Applications*”, Department of Energy, Kenyatta University, 2023

WORKSHOPS
ATTENDED

- Staff Training Programme on ADA Screening Tools (20/4/2021 - 22/4/2021)
- Patent Drafting Training (22/3/2021 - 24/3/2021)

PROFESSIONAL
MEMBERSHIPS

- Graduate Engineer, EBK B6353
- Member, IEEE 92326620

OTHER
PROFESSIONAL
ACTIVITIES

- Reviewer - IEEE Open Journal of the Communications Society
- TPC Member/Postgraduate Forum Chair - IEEE AFRICON 2023
- TPC Member - IEEE AFRICON 2021
- TPC Member - CIAP 2018, CICON 2018
- TPC Member - IEEE AFRICON 2015
- Reviewer - SIRS 2015, 2017, 2018
- Reviewer - IEEE ICT 2014
- Reviewer - SATNAC 2014

RELEVANT
SKILLS

Computer Skills: L^AT_EX, Matlab, Python, Ms Office

REFERENCES

Prof Thomas J.O. Afullo,
Electrical, Electronic & Computer Engineering,
University of KwaZulu-Natal,
South Africa.
+27 82 773 2204 , afullo@ukzn.ac.za

Prof Thomas O. Olwal,
F'SATI/Electrical Engineering,
Tshwane University of Technology,
South Africa.
+27 78 824 7003, olwalto@tut.ac.za

Dr Peter Odero Akuon,
Department of Electrical & Information Engineering,
University of Nairobi,
Kenya,
+254 720 343790, akuon@uonbi.ac.ke