



THE TECHNICAL UNIVERSITY OF KENYA

Haile Selassie Avenue, P.O. Box 52428, Nairobi, 00200, Tel +254(020) 343672, 2249974, 2251300, 341639

Fax 2219689, Email: vc@tukenya.ac.ke, Website: www.tukenya.ac.ke

NAME: DR MARY NABANGALA AHUNA

Current Designation:	Lecturer, TELECOMMUNICATIONS AND INFORMATION ENGINEERING (DTIE)
Office Telephone:	+254(020) 2219929, 3341639, 3343672
Official Email:	mary.ahuna@tukenya.ac.ke
Consultation Hours:	8AM-5PM MON - FRI



EDUCATION

LEVEL	QUALIFICATION NAME	INSTITUTION	YEAR
Doctor of Philosophy (PhD)	ELECTRONIC ENGINEERING	UNIVERSITY OF KWAZULU-NATAL(South Africa)	2019
Masters of Science (M.Sc.)	Electronic Engineering (Telecommunications)	University of KwaZulu-Natal(South Africa)	2016
Bachelor of Science (BSc)	Computing and Information Systems	University of London(United Kingdom)	2014
Bachelor of Science (BSc)	BPHIL IN TECHNOLOGY(ELECTRICAL &ELECTRONIC ENGINEERING)	University of Nairobi(Kenya)	2012
Higher Diploma	DIPLOMA IN ELECTRICAL &ELECTRONIC ENG.	KENYA POLYTECHNIC(Kenya)	2004
Diploma	TECHNICAL EDUCATION	KENYA TECHNICAL TEACHERS COLLEGE(Kenya)	2006
Diploma	DIPLOMA IN ELECTRICAL &ELECTRONIC ENG.	KENYA INSTITUTE OF MASS COMMUNICATION(Kenya)	1993
Certificate	INFORMATION TECHNOLOGY	KENYA POLYTECHNIC(Kenya)	1998
O level/Equivalent	KENYA CERTIFICATE OF SECONDARY EDUCATION	NASOKOL GIRLS SEC SCHOOL(Kenya)	1989

WORK EXPERIENCE

PERIOD	INSTITUTION	POSITION
24/7/2014 - TO DATE	kenya polytechnic	TECHNOLOGIST
01/03/1995 - 01/07/2009	kenya polytechnic	SNR TECHNICIAN

GENERAL STATEMENT ON RESEARCH AREAS

I am currently focused earth-satellite communication link performance in addition to Wireless Communication, Machine learning and automation

CURRENT RESEARCH PROJECTS

TUKSat-1 Mission for Vessel Tracking and Rescue Operations in Lake Victoria	Nanosatellite technology
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SELECTED PUBLICATIONS

TITLE	LINK TO PULICATION
Rainfall Rate Prediction based on Artificial Neural Networks For Rain Fade Mitigation over Earth Satellite link	http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8095546
Outage Prediction during Intense Rainstorm Events Using Queuing Theory and Markov Chains over Radio Links	http://www.jpier.org/PIERM/pierm73/19.18060205.pdf
Specific Rain Attenuation Dependence on Rain Storm Magnitudes and Measured Drop Sizes	https://ieeexplore.ieee.org/document/8572381
Effects of Storm Attenuation Over Satellite Links in Sub-Tropical Africa	https://ieeexplore.ieee.org/document/8597964
Rain Attenuation Prediction Using Artificial Neural Network for Dynamic Rain Fade Mitigation	https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8643146
Rain Attenuation Prediction Using Artificial Neural Network for Dynamic Rain Fade Mitigation	https://ieeexplore.ieee.org/document/8643146
Fade Slope Prediction Model for rain storms over Sub-tropical Africa	https://ieeexplore.ieee.org/document/9133736
Pylon Anti-Vandalism Monitoring System using Machine Learning Approach	https://ieeexplore.ieee.org/document/9219946?denied=
30-Second and One-Minute Rainfall Rate Modelling and Conversion for Millimetric Wave Propagation in South Africa	https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8532248

COURSES TAUGHT

NAME	DESCRIPTION	PERIOD
Robotics & Cybernetics	Geared towards design and implementation of automated control systems	January 2016 - April 2016
Satellite and Mobile Communications	Wireless communication technologies and standards	Sept 2019 - TO-DATE
Digital Filter Design	Digital signals and systems with focus on the the design of digital filters	Sept 2019 - TO-DATE
Microprocessor Systems	Microprocessors and their interfaces to memory and I/O devices	Sept 2019 - TO-DATE
Telecommunication and the Internet	Wireless communication and the internet	Jan 2020 - TO-DATE
Automated Process Control Systems	Includes controllers, online measurement systems, SCADA systems and Robotics	Jan 2020 - TO-DATE
Optical Communication	Transmission of signals using light	Sept 2020 - TO-DATE
Wireless Communication and Networking	Signal transmission via electromagnetic waves	Sept 2020 - TO-DATE
Microprocessor Architecture and Interfacing	Programming, hardware design, Memory and IO interfacing, Interrupts	Jan 2020 - TO-DATE
Comptuter Programming	C++ Programming	Jan 2020 - TO-DATE

PROFESSIONAL AFFILIATIONS AND SOCIETIES

TITLE	INSTITUTION
Member	IEEE-HKN, UKZN Chapter
Member	South African Institute of Electrical Engineers
Member	IEEE
Member	IEEE Women in Engineering