Anthony Faustine

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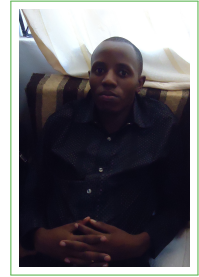
Education

2016–Present	**PhD Electronics and Telecom Engineering**, *The Nelson Mandela African Institution of Science and Technology*, Arusha,Tanzania. *Title: NILM Algorithms for Sustainable Energy in Residential Building.*
2010–2012	**M.Sc. In Telecommunications Engineering**, *The University of Dodoma*, Dodoma,Tanzania.
2006–2009	**B.Sc. in Electronics Science and Communications**, *University of Dar es salaam*, Dar es salaam,Tanzania.

Master thesis

Title	*Design of Wireless Sensor Network for Water Quality Monitoring around Lake Victoria Basin, Tanzania*
Supervisors	Prof. A.N Mvuma

Experience

Research Experience

2014–Present	**Research Team Leader**, *UDOM-TCRA project(Applying Mobile Technology for Medical Drugs Verification in Tanzania.* Manage the flow of day-to-day research operations. Detailed achievements:

- Lead development team to analyze, design and develop the mobile-based medical drugs verification system (DVS) in Tanzania;
- Organize stake-holders workshop for the Project;
- Organize and lead project meeting;

| 2013–Present | **Research Associate**, *UDOM-TCRA project(Applying Mobile Technology for Medical Drugs Verification in Tanzania*. |

Manage the flow of day-to-day research operations.
Detailed achievements:
- Identify appropriate anti-counterfeits technologies for pharmaceutical supply chain in Tanzania.
- Prepare and make presentation of different pharmaceutical anti-counterfeits technologies.
- Perform requirements analysis for a tractability system for management of Pharmaceutical Supply Chain in Tanzania.
- Lead development team to design and implement RFID system.
- Lead development team to design and implement Adverse Drugs Reporting (ADR) system.

| 2012–2015 | **Research Assistant**, *UDOM-Vicres Project(Innovative and Integrated Solutions for Governance of Water Resources within Lake Victoria Basin.*. |

Conduct research, design and develop integrated ICT solution for Water Resources Governance.
Detailed achievements:
- Identifies Hardware and software requirements for the integrated ICT solution to be used to effectively address governance challenges of water resource around Lake Victoria Basin.
- Prepare and make presentation on Wireless Sensor Networks as one of the ICT solutions to used to effectively address governance challenges of water resource around Lake Victoria Basin.
- Design and implement integrated ICT solution that address governance challenges of water resource around Lake Victoria Basin.
- Lead the hardware development team to develop and implement Wireless Sensor Networks and Mobile sensing for Water Quality Monitoring around Lake Victoria Basin.
- Prepare documentation and presentation for the implemented solution.
- Train stakeholders in Mwanza, Tanzania and Kampala Uganda how to use the developed solution.

Teaching Experience

| 2013–Present | **Assistant Lecturer**, *The University of Dodoma(Department of Telecommunications and Communications Networks)*. |

Detailed achievements:
- Teach undergraduates courses(Wireless Networking, Information theory and Coding, Wireless and Mobile Communication and Telecommunication Transmission systems courses).
- Assist senior lecturer in postgraduate courses (Wireless Communication and Applications and Mobile Computing and Data Management).
- Supervise undergraduate final year projects.

| 2010–2013 | **Tutorial Assistant**, *The University of Dodoma(Department of Telecommunications and Communications Networks)*. |

Detailed achievements:
- Conducting tutorial sessions and lead lab session to undergraduates students (Signal and Systems, Introduction to Computer Networks)

2010–2013 **Tutorial Assistant**, *National Programme for Information and Communication Technology for Secondary School.*
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Detailed achievements:
- Train and Evaluate Secondary School Teachers on ICT related topics.
- Prepare Training Materials

Professional service

External Reviewer: Wireless Sensor Network Journal 2015

Research Interests

- Wireless Communication, Wireless Sensor Networks, Signal Processing, Machine Learning, Internet of Things, Computational Sustainability, SmartGrid and ICT4D

Skills

Programming Languages: C++, Python and Matlab

Microcontroller Platforms: Arduino and AVR

Additional Software: LaTeX, Sphinx, R, Markdown, Ns-3 and Omnet++

Conference and Workshop

- Big Data Workshop by Prof. Jennifer Widom. *NMAIST, 30th Jan to 2nd Feb 2017.*
- Design Thinking and Creativity Workshop by Prof. Jennifer Widom. *NMAIST, 28th Jan 2017.*

Poster Sessions

- Anthony Faustine (2014) "Wireless sensor networks and mobile sensing for water quality monitoring and reporting". In Poster Session at Vicres Scientific Joint Conference.

Volunteer Work

- Teach children Sunday school with the aim to help teenager realize the potential
- Prepare technical training and workshop on using open-source hardware platform (Arduino) in designing and developing electronic systems
- Prepare training workshop on using LaTeXfor Scientific Writing.

Affiliations

- ACM Student Member

Publications

Faustine Anthony, Maria Gabriel, and Bertha Shao. Open source cellular technologies for cost effective cellular connectivity in rural areas. *International Journal of Computer Applications*, 146(15), 2016.

Anthony Faustine and Aloys Mvuma. Design and simulation of wireless sensor network for water quality monitoring around lake victoria. *JOURNAL OF INFORMATICS AND VIRTUAL EDUCATION*, page 37, 2013.

Anthony Faustine, Aloys N Mvuma, et al. Ubiquitous mobile sensing for water quality monitoring and reporting within lake victoria basin. *Wireless Sensor Network*, 6(12):257, 2014.

Anthony Faustine, Aloys N Mvuma, Hector J Mongi, Maria C Gabriel, Albino J Tenge, Samuel B Kucel, et al. Wireless sensor networks for water quality monitoring and control within lake victoria basin: prototype development. *Wireless Sensor Network*, 6(12):281, 2014.

Anthony Faustine, Nerey Henry Mvungi, Shubi Kaijage, and Kisangiri Michael. A survey on non-intrusive load monitoring methodies and techniques for energy disaggregation problem. *arXiv e-print*, 1703(00785), 2017.

Anthony Faustine and Lucian Ngeze. Enhancing teaching and learning communication network courses in higher learning institutions in tanzania using simulations. *JOURNAL OF INFORMATICS AND VIRTUAL EDUCATION*, page 30, 2013.

Nyaura Kibinda, Aloys N Mvuma, and Anthony Faustine. Handover algorithm for machine type communication in lte network. *Informatics and Virtual Education*, 5:28, 2015.