

Curriculum Vitae

Dr. Gabriel Ndung'u Kamau
BeD (Arts). Hons. (KU, Kenya), MBA (MIS), PhD BA (SIS)
(UoN, Kenya)

Personal Information

Name Dr. Gabriel Ndung'u Kamau
Address: P.O. Box 75 -10200, Murang'a, Kenya
Email Address gkamau@mut.ac.ke
Citizenship: Kenyan

Research Interests

ICT4D; IS Philosophy; Computer Security; Disruptive Technologies.

Education Background

- Doctor of Philosophy in Business Administration (Strategic Information Systems): University of Nairobi, Kenya **(2017)**: Thesis Title: ***Contextual factors, User Experience, Usage and Public Value of E-government Services in Kenya***
- Master of Business Administration in Management Information Systems University of Nairobi, Kenya (2008). Research Project Title: ***"A survey of challenges faced in data migration by companies quoted at Nairobi Stock Exchange"***.
- Bachelor of Education, Mathematics and Business Studies, Second Class Honors Upper Division, Kenyatta University (1999)

Professional Training

- 11th March – 15th March 2024: ISO 9001:2015 and ISO 27001:2013 Internal Auditor's Certification raining by Maier Consulting Limited
- Sept – Oct 2021: Digital Education for Universities by The Open University, UK
- June 2020: ICSI | CNSS Certified Network Security Specialist: International Cybersecurity Institute
- May 2019: Big Data Analyst: IBM Certification

Current Employment

Senior Lecturer: Murang'a University of Technology, School of Computing, and Information Technology (August 2024 – Present)

Other Work Experiences

2018 - 2024: Lecturer: Murang'a University of Technology
2013 - 2018: Assistant Lecturer: Murang'a University of Technology
2009 – 2013: Assistant Lecturer, Kenya Methodist University
2011 – 2013 – Part time lecturer – Kenyatta University
2001- 2009: Graduate teacher, (Math & Computer Studies), Teachers Service Commission
2000 – August 2001: Computer Tutor: Trans Business Machines (TBM) – Thika

University Administrative Duties/ Responsibilities

2020 to date: Ag. Director: Open, Distance and eLearning, Murang'a University of Technology

Curriculum Vitae

2024 to date: Member, Liaison Committee on County Sustainability Anchored Academia Partnership (SAAP)

2023 to date: Member, Board of Artificial Intelligence Committee

2023 to date: Member, Linkages, Outreach and Partnership

2021 to date - Member, Board of Academic QA and Performance Management

2021 to date Member, MUT. Advisory Board of ICT

2019 – 2020: University Timetabling Officer, Murang'a University of Technology

2018 –2020 School of Computing and Information Technology Post Graduate Coordinator

2022: Member/Secretary: MUT-HEP Online Management Partnership Committee

2021: Member Data, ICT & Engineering Centre of MUTgy Committee

2019 - 2020, School Examination Officer, School of Business and Economics, MUT.

Workshop and Training Attended

1. 2024: Universities Dialogue on Artificial Intelligence (AI) organized by CUE and Intel on 21.06.2024 in Naivasha
2. 2024: DIES NMT Kenya 2023 training course on “The Role of Collaborative Online International Learning (COIL) and Virtual Exchanges in promoting Internationalization at Home in Higher Academic Institutions in Kenya: 11th to 16th June 2024 held in Kisumu, Workshop 2.
3. 2023: DIES NMT Kenya 2023 training course on “The Role of Collaborative Online International Learning (COIL) and Virtual Exchanges in promoting Internationalization at Home in Higher Academic Institutions in Kenya: 13th to 16th February 2024
4. 2022: E-content Development and Delivery Training: Held on 23rd and 26th November 2021 and 25th to 27th January 2022
5. 2022: Information Security Management Systems Documentation Workshop: Held in Nokras Hotel in Murang'a County held on 18th to 20th January 2022
6. 2021: Information Security Management Systems Implementers Training: Held at Murang'a University of Technology held on 6th to 8th October 2021
7. 2017: Trustee Development Programme Kenya (TDPK) training held at Kenya College of Insurance, Nairobi from 20th – 24 November 2017
8. 2017: Sci-GaIA workshop on "e-Infrastructures and Open Science in support of Public Health", held at the Conference Centre of the Kenyatta University in Nairobi, Kenya, on the 8th of February. 2017
9. 2020: IST-Africa Horizon 2020 Workshop: 10 November 2016 Venue: Moi University Nairobi Campus, Bazaar Building, Nairobi, Kenya Organized by the Ministry of Education Science and Technology (Kenya) in cooperation with IIMC, Ireland (IST-Africa Project Coordinator) as part of IST-Africa Initiative supported by the European Commission under Horizon 2020 Workshop Goals
10. 2016: IEEE Workshop on “Introduction to systems modeling with unified modeling Language (UML) training”, held at the Conference Centre of the Kenyatta University in Nairobi, Kenya: on 30th - 31st August 2016

Conferences Attended

1. November 2023: DeKUT International Conference on Science Technology, Innovation & Entrepreneurship, Date: Presented Paper on Evaluating Public Value Creation Through Electronic Human Resource Management: 8th – 10th November 2023

Curriculum Vitae

2. January 2021: University of Nairobi and Kenyatta National Hospital Webinar; utilizing eHealth strategies to enhance healthcare delivery.
3. October 2018: 4th Industrial Revolution Favors Africa: Emerging technologies and Artificial intelligence conference held at Radisson Blu Hotel
4. May 2018: IEEE conference held in Botswana. Presented a paper on Block chain technology: Is this the solution to EMR interoperability and security issues in developing countries.

Publications

1. Mwangi, G., & **Kamau, G. (2024)**. Public Value Creation Through Electronic Human Resource Management In Public Sector: A Mixed Methods Approach. *International Journal of Science, Technology & Management*, 5(3), 566-575. <https://ijstm.inarah.co.id/index.php/ijstm/article/view/1090>
2. **Kamau, G.**, & Mwangi, G. (2024, May). E-HRM Practices and Public Value Creation. A Case of County Government in Kenya. In *2024 IST-Africa Conference (IST-Africa)* (pp. 1-8). IEEE. <https://ieeexplore.ieee.org/abstract/document/10569453>
3. Kiruki, J. K., Muketha, G. M., & **Kamau, G. N. (2023)**. A Novel Alert Correlation Technique for Filtering Network Attacks. *International Journal of Network Security & Its Applications (IJNSA)* Vol 15, Issue 05: <https://repository.mut.ac.ke/xmlui/handle/123456789/6434>
4. Wambua, A. W., & **Kamau, G. N (2023)**. Security-aware Mobile Application Development Lifecycle (sMADLC). *International Journal of Education and Management Engineering*, 2023. DOI: 10.5815/ijeme.2023.02.05: <https://repository.daystar.ac.ke/bitstream/handle/123456789/4202/Security-awareMobileApplicationDevelopment.pdf?sequence=1&isAllowed=y>
5. Njuguna, L & **Kamau, G (2023)**. An Ensemble Learning Model for Predicting Social Engineering Pharming Attacks, *International Journal of Computer Applications Technology and Research* Volume 12–Issue 02, 32-41; <https://www.academia.edu/download/99827964/ijcatr1202.pdf>
6. Kiruki, J. K., Muketha, G. M., & **Kamau, G. N. (2023)**. Metrics For Evaluating Alerts in Intrusion Detection Systems. *International Journal of Network Security & Its Applications (IJNSA)* Vol 15, Issue 01: <https://repository.mut.ac.ke/xmlui/handle/123456789/6166>
7. **Kamau, G. N. (2022)**. ICT4D Research in Developing Countries: A Call for Pragmatism Approach. *International Journal of Computer & Information System (IJCIS)*, 3(2), 51-55: <http://www.ijcis.net/index.php/ijcis/article/view/67>
8. Ndung'u, R. N., **Kamau, G. N.**, & Wambugu, G. M. (2021). Using Feature Selection Methods to Discover Common Users' Preferences for Online Recommender Systems. *International Journal of Computer and Information Technology* (2279- 0764), 10(1): <https://repository.mut.ac.ke/xmlui/handle/123456789/6105>
9. Ndung'u, R. N., **Kamau, G. N.**, & Wambugu, G. M. (2021). Developing Hybrid-Based Recommender System with Naïve Bayes Optimization to Increase Prediction Efficiency: <https://repository.mut.ac.ke/xmlui/handle/123456789/6097>
10. Wanjau, S. K., Wambugu, G. M., & **Kamau, G. N. (2021)**. SSH-Brute Force Attack Detection Model based on Deep Learning. *International Journal of Computer Applications Technology and Research* · January 2021 DOI: 10.7753/IJCATR1001.1008: <http://repository.mut.ac.ke:8080/xmlui/handle/123456789/4504>
11. Ntonja K.G., Muketha, G. M., & **Kamau, G. N. (2020)** Cloud Data Privacy Preserving Model for Health Information Systems Based on Multi Factor Authentication. *International Journal of Recent Technology and Engineering (IJRTE)* ISSN: 2277-3878, Volume-9Issue-

Curriculum Vitae

- 3, September 2020. DOI:10.35940/ijrte.C4458.099320
12. Mwangi, E. G., Muketha, G. M., & **Kamau, G. N.** (2020). Optimized Trust-Based DSR Protocol to Curb Cooperative Blackhole Attacks in MANETs Using NS-3. *International Journal of Networks and Communications* P-ISSN: 2168-4936 e-ISSN: 2168-4944 10(1): 10-19 doi:10.5923/j.ijnc.20201001.02
 13. Mwangi, E. G., Muketha, G. M., & **Kamau, G. N.** (2020). Design and Implementation of Resilient Cooperative Bait Detection Technique to Curb Cooperative Black Hole Attacks in MANETs Using DSR Protocol. *International Journal of Networks and Communications* p-ISSN: 2168-4936 e-ISSN: 2168-4944 2020; 10(1): 1-9 doi:10.5923/j.ijnc.20201001.01
 14. Muchori, J. G., **Kamau, G.**, & Musyoka, F. M. (2021). Internet of Things-Based model for identifying pediatric emergency cases. <https://repository.mut.ac.ke/xmlui/handle/123456789/6097>
 15. **Kamau, G.**, Boore, C., Maina, E., & Njenga, S. (2018, May). Blockchain technology: Is this the solution to EMR, interoperability and security issues in developing countries? In 2018 IST-Africa Week Conference (IST-Africa) (pp. Page-1). IEEE: <https://ieeexplore.ieee.org/abstract/document/8417357/>
 16. **Kamau G.**, Wausi A. & Njihia J. (2017), Contextual Factors and Public Value of E-government Services in Kenya: *Global Scientific Journal*. GSJ: Volume 5, Issue 9, September 2017, Online: ISSN 2320-9186: <https://repository.kcau.ac.ke/handle/123456789/719>
 17. **Kamau G.**, Njihia J. & Wausi A. (2016), E-government websites user experience from public value perspective: Case study of iTax website in Kenya Publisher: Institute of Electrical and Electronics Engineers (IEEE), 2016: <http://erepository.uonbi.ac.ke/handle/11295/102761>
 18. **Kamau. G.** (2014), Evaluating the Public Value of E-Government Services: Actor Network Theory Approach: Presented at 1st DeKUT International Conference on Science, Technology, and Innovation; Dedan Kimathi University of Technology, 2014
 19. **Kamau G.** (2008), Challenges faced in data migration by companies quoted at NSE, MBA Project Report, University of Nairobi, Library Digital Repository: <https://repository.mut.ac.ke/xmlui/handle/123456789/553>

Curriculum Development

1. 12th February 2019: Stakeholders meeting for curriculum development for Master of Science in Information Technology and Msc in Computer Science, Kirinyaga University
2. 22nd Nov 2018: Stakeholders meeting for curriculum development for Bsc in Software Engineering and Computer Science Engineering, Kirinyaga University

Students' Supervision to completion

PhD

1. **Jane Kinanu Kiruki:** A Real Time Intrusion Detection Model for Local Area Networks Based on Enhanced Alert Correlation (2023)
2. **Ephantus Mwangi Gichuki:** Resilient Co-operative Bait Detection Technique to Curb Blackhole attacks in Mobile Adhoc Networks (2021)
3. **Ndung'u Rachael Njeri** Naïve Bayes-Based Hybrid Recommender Model For Mobile Marketplace Applications (2021)

Masters

1. **Winfred Kitaka:** A Hybrid Model for Predicting E-Learning Course Dropout Rate For

Curriculum Vitae

Post Graduate Students (2023)

2. **Njuguna Lilian:** A Model for Predicting Social Engineering-Based Pharming Attacks Using Ensemble Learning (2022)
3. **Ntonja Kenneth Gitonga:** Data Privacy Preserving Cloud Model for Health Care Management Systems Based on Multifactor Authentication (2021)
4. **Juliet Muchori:** IoT Based Model for Identification of Child Emergency Cases (2021)

Ongoing PhD Supervision

1. **Peter Kimemia Mwangi:** A Surrogate Agent Model Based on Reinforcement Learning for Improved Scalability of An Internet of Things Distributed Ledger
2. **Juliet Muchori :** A Multi Parameter Hybrid Machine Learning Model For Predicting Software Failure
3. **Fortine Mwhaki Mata:** A Trust Based Multi Path Congestion Avoidance Technique To Curb Malicious Activity For Mobile Nodes In Wireless Sensor Networks
4. **Denis Wapukha Walumbe:** A Lightweight Enforcement Proof of Stake Service Model For Enhancing Data Privacy In Telemedicine Systems

Ongoing Masters Supervision

Patrick Mwenda: An Authentication Model Based on Blockchain Smart Contract Technology to Curb Double Borrowing in Mobile Banking

Kipterer Collins Kiplangat: Multi-Layer Perceptron Based Fuzzy Logic Technique For Detection of Denial-Of-Service Attacks In Mobile Ad Hoc Networks.

Grant Awarded

1. Global Development Incubators Grant: - Kshs 625,000
2. Murang'a University Vice Chancellor 2020 Grant: -Kshs 400,000

Professional Affiliation

1. Association for Information Systems (AIS) Member No: 71848736
2. Association of Computing Practitioners: Kenya (ACPK) - Member No: PM000447

Consultancy Services

- **Kenya School of Government 2017-2018:** ICT proficiency and Record Management Training
- **Africa Management Solutions Ltd 2017:** Recruitment of Geospatial Jobs for KNBS.

Community Services

- **May 2024 -** Member, Management Committee, MUT, SACCO
- **May 2022 to Date:** St. Joseph, Kamulu Technical Institute: CMA Project.
- **Feb 2017 to July 2023:** Member of Board Trustees: MUT Pension Scheme
- **Jan 2019 - Dec 2021:** Member of Murang'a High School Parents Association.

Referees

Provided on request