

Dr. Daniel Kimutai Makupi, Ph.D.
[PhD IT Security & Audit, MSc IT, BMIT]
P.o Box 18-30101 Eldoret, Kenya
Contacts: 0727582498
Email: makupidaniel@gmail.com

Career Objectives

To pursue the field of cyber security so as to be continuously reliable, innovative and discover new technologies through research.

Research Experience

Certificate

PhD in IT security and Audit

School of Science Engineering & Technology,
Department of Computer Science, Kabarak
University, Kenya.

Research Topic

**An ISO 27001 Based Model to Determine
University Information Security Maturity
Under Uncertainty**

Supervisor

Prof. Simon Maina Karume

Graduation Date

17th December 2021

Certificate

Master of Science in IT

School of Science Engineering & Technology,
Department of Computer Science, Kabarak
University, Kenya.

Research Topic

**Reducing Road Carnage Using A Web Based
Model For Monitoring Road Traffic Crimes**

Supervisor

Prof. Kefa V.O Rabah

Graduation Date

21st December 2016

Academic Qualification

<u>YEAR</u>	<u>INSTITUTION</u>	<u>CERTIFICATE</u>
Dec - 2021	Kabarak University	PhD IT Security & Audit
Dec- 2016	Kabarak University	Master of Science in IT
Dec-2014	Kabarak University	Business Management & Information Technology (BMIT)
Jan-2016	Charles Sturt University	Certificate in cyber-Security
Dec - 2023	Charles Sturt University	Certificate in IoT
Feb – 2019	Huawei Academy	HCIA Routing & Switching (R&S)
Feb - 2019	Techno-brains VUE centre Nairobi	HCIA Certificated Associate & Instructor
May-2016	IBM Middle East and Africa – IBM Mea University.	Business Intelligence Specialist with Cognos Report Studio V10.2.2
May-2016	IBM Middle East and Africa – IBM Mea University.	Application Security Specialist with IBM Security AppScan v8.7
Sept- 2013	Cisco Networking Academy	Cisco CCNA (R&S)
Feb -2018	African advanced level telecommunication institute (AFRALTI)	Cisco Certified Network Instructor
Dec- 2010	Simotwo High school	Kenya Certificate of Secondary Education
Dec-2005	Kapchorwa Primary School	Kenya Certificate of Primary Education

Research Interests

Cyber security, Mobile programming, cloud computing, Cryptography, Network Security, Intrusion Detection and Prevention Systems, Computer Security Architecture and Information Systems Security.

Research Publications

Makupi, D., Karume, S.M., Rabah, K. (2016). The Impact of Driver Behaviour on Road Accidents and the Need for a Driver Road Safety Index (DRSI) in Kenya. *Mara Res. J. inf. Sci. Technol.* Vol. 1, No. 1, pp. 66 - 77. ISSN 2518-8844.

Makupi, D. and Karume, S. M. (2016). Addressing Road Carnage Challenges using a Web Based Model to Compute the Driver Index. *Mara Res. J. inf. Sci. Technol.* Vol. 1, No. 1, pp. 53 - 65. ISSN 2518-8844.

Juma, J., & Makupi, D. (2017). Understanding Database Security Metrics: A Review. *Mara Res. J. inf. Sci. Technol.* Vol. 1, No. 1, September 2017, Pages 40 - 48

Makupi, D. (2017). Understanding Security Status of an Online Banking Infrastructure *Mara Res. J. inf. Sci. Technol.* Vol. 1, No. 1, pp. 53 - 65. ISSN 2518-8844.

Makupi, D., & Karume, S. M. (2019). Towards an Information Security Maturity Model for Universities Based On ISO 27001. *American Journal of Humanities and Social Sciences Research (AJHSSR)* Volume-3, Issue-6, pp-241-245

Makupi, D., & Masese, N. (2019). Determining Information Security Maturity Level of an organization based on ISO 27001. *SSRG International Journal of Computer Science and Engineering (SSRG-IJCSE) – Volume 6 Issue 7 – July 2019*

Makupi, D. (2019). A Design of Information Security Maturity Model for Universities Based on ISO 27001. *The International Journal of Business & Management.* ISSN 2321–8916

Makupi, D. (2020). 5G propelled AI, IoT and Blockchain. *International Journal of Advanced Research in Computer Engineering & Technology (IJARCET)* Volume 9, Issue 5, May 2020, ISSN: 2278 – 132.

Text Books

Makupi, D., Karume, S.M., Rabah, K. (2017). *Reducing Road Carnage Using a Web Based Model.* Lambert Academic Publishing. 978-3-330-35202-5

Makupi, D., & Kibet, A. (2019). *Determining The Impact Of IS Security Factors On University Information Security Maturity.* Lambert Academic Publishing.978-620-0-29420-3.

Employment History

Since January, 2022 to Date: Full time Lecturer IT Department, Murang'a University of Science and Technology.

Since January, 2022 to 2024: Full time Lecturer Faculty of ICT and Engineering, Zetech University.

Since January 2021 to 2023: Part-Time Lecturer Department of Computer Science, University of Kabianga.

Since January, 2015 to 2021: Part-time and Subsequently Full time Lecturer Department of Computer Science, Kabarak University.

Since January 2017 to 2021: Part-Time Lecturer Department of Computing and Mathematics, Laikipia University.

Since September 2017 to 2018 September: Part-Time Lecturer Department of Computer Science, Egerton University.

Management Experience

Since March, 2022 to September 2024: Program Leader Software Engineering-Faculty of ICT and Engineering, Zetech University. Duties are outlined below;

- Advising on all aspects of the programme i.e. title, philosophy, rationale, goals, ELOs, duration and structure, delivery modes, management and administration, academic regulations, course evaluation, quality assurance mechanisms, unit distribution and description etc.
- Read, understand and advise on the curriculum.
- Make summary presentations of the above internally and take the university officials through the steps taken to ensure that the programme's resource requirements are met e.g. staff, class rooms, teaching aids, library books, online reading materials etc.
- Make summary presentations to the Commission for University Education during the inspections.
- Understand the requirements of the Commission for University Education standards and guidelines
- Ensure that the programme is academically coherent and that it remains informed by research developments and other initiatives, in the field concerned;
- Ensure that the programme is responsive to market need and that appropriate actions are taken in response to all stakeholders;
- Recommend necessary changes to be done on any aspect of the programme
- Conducting internal marketing sessions that involve mentorship of diploma and certificate students to ensure their progression to the Bachelor Degrees.
- Mentorship of the faculty members on research publications, mentorship of students and best strategies for running the various programmes.

Since September, 2017 to 2021: Course Coordinator for Certificate in IT and Diploma in IT and Computer Science at Kabarak University. Involved in strategy and planning including liaise with other teams to ensure overall program co-ordination through ensuring we have met the standards outlined by ministry of education through the CUE (Commission of University Education).

Since September 2015 to 2016: Head of Department of Computer Science, Nakuru College of Health Science and Management. Duties entailed supervision of teaching staff to ensure preparation of examination papers; marking of examination scripts; tutorials; preparation of teaching; supervision of academic work; administrative work; laboratory and laboratory preparation; and research/research assignments.

Programming Language Experience

Object-Oriented Programming with C++ & Java
Web Application Programming (PHP, MYQL, CSS & JavaScript)
Programming with Python and also Visual basic.Net
Blockchain based programming with solidity

Membership of Professional Bodies

Registered Member of the Information Technology Professional Association (ITPA).
Registered Member of the Computer Society of Kenya (CSK).

University Curriculum Development participation

Bsc. computer science (Laikipia University)
Bsc. Information Communication & Technology (Laikipia University)
Diploma in Information Technology - Review (Kabarak University)
Diploma in Computer Science - Review (Kabarak University)
Certificate in Information Technology - Review (Kabarak University)
Diploma in Computer science - Review (Zetech University)
Master of Science in computer science (Zetech University)
Master of Science in information technology (Zetech University)
PhD in Computer science (Zetech University)

Consultancy

Curriculum design, Validation and Content Development for computer and Network security –
Open University of Kenya (OUK) – 2024 Ongoing

Conference participation and presentations

Presented a hackathon challenge at the IBM, CSU and ITIC 2020 Cyber Security Technical Summit and Hackathon. On 22-23 June 2020 at Charles Sturt University, Australia.

Presented a Paper “Determining University Information Security Maturity under Uncertainty Based on ISO 27001” at the - International Conference on Innovative Engineering Technologies (ICIET-21) on 28th -29th October 2021 at Chicago, USA.

Presented a paper “An ISO 27001 Based Model to Determine University information security Posture Under Uncertainty” at the – Zetech University Annual Research Conference on *“innovations for sustainable development and emerging disruptions in the 21st century”* on 24th – 28th July 2022.

Presented a paper “Driver Road Safety Index in Curbing Road Accidents in Kenya” at the – Zetech University Annual Research Conference on *Leveraging Technology for Sustainable Social Economic Development* on 24th – 28th July 2023.

Research Funding

Received research grant of 70,000 from National Commission for Science Innovation and Technology (NACOSTI) for MSc IT research funding financial year 2015/2016 towards research on “Reducing Road Carnage Using a Web Based Model That Implements a DRSI”.

Community Participation

Board Member Chair- Academic of Metkei Girls Secondary School, Elgeiyo-Marakwet County.
Board Chairman - Kipsaos Boys High School, Elgeiyo-Marakwet County.

Referees

Referees Name : Dr. Eng. Wilfred Gikaru
Occupation: Dean ICT and Engineering
Institution : Zetech University
Phone : 0721287208.
Email Wilfred.gikaru@zetech.ac.ke

Referees Name : Dr. Nelson Masese
Occupation: HOD - Computer Science & IT
Institution : Kabarak University
Phone : 0737070029.
Email Nmasese@kabarak.ac.ke

Referees Name : Dr Nickson Menza Karie
Occupation: Cyber Security Research Fellow
Institution : Edith Cowan University
Phone : +26876534638.
Email: Nmkarie@gmail.com