

DEPARTMENT OF COMPUTING AND INFORMATICS



Name of Staff: Dr. Alex Kibet

Designation/Rank: Lecturer

Laikipia University: School of Science and Applied Technology

Department: Computing and Informatics

School: School of Science and Applied Technology

Email: akibet@laikipia.ac.ke

LinkedIn: [https://www.linkedin.com/in/alex-](https://www.linkedin.com/in/alex-kibet-phd-267259100/?skipRedirect=true)

[kibet-phd-267259100/?skipRedirect=true](https://www.linkedin.com/in/alex-kibet-phd-267259100/?skipRedirect=true)

Research Gate: https://www.researchgate.net/profile/Alex-Kibet-4?ev=hdr_xprf

Google Scholar: <https://scholar.google.com/citations?hl=en&user=-oNMcTAAAAAJ>

Academia.edu Link: <https://laikipiauniversity.academia.edu/AKibet>

ORCID ID: <https://orcid.org/0009-0007-5118-3352>

A. Educational Background and Qualifications

1. **Doctor of Philosophy (PhD) in Information Technology**, Kabarak University, Kenya (2022)
2. **Master of Science (MSc) in Information Technology**, Kabarak University, Kenya (2019)
3. **Bachelor of Science (BSc) in Computer Science**, Laikipia University, Kenya (2016)

B. Brief Auto-biography

Dr. Alex Kibet is the Director of ICT and a Lecturer in the Department of Computing and Informatics at Laikipia University, Kenya. He is an accomplished ICT leader, researcher, and academic whose work focuses on digital transformation, cybersecurity, digital governance, artificial intelligence, blockchain technologies, and higher education innovation.

He holds a PhD and MSc in Information Technology from Kabarak University and a Bachelor of Science in

Computer Science from Laikipia University. Over the years, Dr. Kibet has led and contributed to numerous institutional digital transformation initiatives, including enterprise resource planning (ERP) implementation, ICT infrastructure modernization, cybersecurity enhancement, data governance, and systems integration. His work has significantly improved operational efficiency, service delivery, and digital resilience within higher education institutions.

In addition to his institutional leadership role, Dr. Kibet actively contributes to national and regional policy development. He has served on technical committees supporting the review of Kenya's University Funding Model and the Means Testing Instrument (MTI) and has participated in the development of the East African Community Digital Transformation and Artificial Intelligence Strategy as well as Kenya's Digital Public Infrastructure agenda. As a researcher and postgraduate supervisor, his interests span digital governance, cybersecurity, artificial intelligence governance, blockchain systems, digital trust frameworks, and institutional transformation. He has published extensively in peer-reviewed journals, secured research grants, supervised postgraduate research, and facilitated capacity-building programmes in partnership with government agencies, industry, and international organizations.

Dr. Kibet is passionate about leveraging technology, innovation, and strategic leadership to strengthen institutional governance, enhance service delivery, and drive sustainable digital transformation across Africa.

C. Areas of Specialization

1. Digital Transformation and Innovation
2. Digital Governance and ICT Strategy
3. Cybersecurity and Digital Resilience
4. Artificial Intelligence Governance
5. Blockchain Technologies and Digital Trust Frameworks
6. Higher Education Technology Management

D. Research Interests

1. Digital Governance and Institutional Transformation
2. Cybersecurity and Digital Resilience
3. Artificial Intelligence Governance and Applications
4. Blockchain Technologies and Digital Trust Frameworks
5. Data Governance and Digital Identity Systems
6. Higher Education Digital Transformation

E. All Publications

- a. *Journal Articles*

1. **Kibet, A.** (2026). Assessing human-induced cybersecurity risk using a Cyber Security Human Vulnerability Exposure Index (CSHVEI). *Journal of Applied Sciences*, 16, 696–717.
<https://doi.org/10.4236/ojapps.2026.162043>
2. **Kibet, A.** (2026). A design science study of blockchain-based governance and incentive architectures for ride-sharing platforms. *Open Journal of Applied Sciences*, 16(1), 300–319.
<https://doi.org/10.4236/ojapps.2026.161019>
3. Agata, E., & **Kibet, A.** (2026). Internet of Things-enabled data collection in Kenya: Implications for digital sovereignty and data governance. *African Journal of Social Sciences and Humanities Research*, 1(1), 1–21. <https://journals.niru.ac.ke/index.php/ajsss/article/view/4/4>
4. **Kibet, A.**, & Biegona, C. (2025). A framework for stability in cryptocurrencies: Fiat integration for e-commerce applications. *International Journal of Cryptocurrency Research*, 5(1), 10–24.
<https://doi.org/10.51483/IJCCR.5.1.2025.10-24>
5. Kasina, M. M., Kihoro, J. M., & **Kibet, A.** (2025). Credit risk indicators for microfinance institutions within Machakos County, Kenya. *Indian Journal of Computer Science and Technology*.
<https://doi.org/10.59256/indjst.20250403021>
6. Kasina, M. M., Kihoro, J. M., & **Kibet, A.** (2025). Performance of different machine learning algorithms for credit risk classification. *Journal of Data Analysis and Information Processing*, 13(4), 504–519.
<https://doi.org/10.4236/jdaip.2025.134029>
7. **Kibet, A.**, & Langat, G. (2025). Multiple sclerosis predictions and sensitivity analysis using robust models. *Journal of Intelligent Medicine and Healthcare*, 3(1), 1–14.
<https://doi.org/10.32604/jimh.2022.062824>
8. **Kibet, A.** (2025). Enhancing transparency and security in means testing for education financing: A blockchain-based approach. In *Proceedings of the IST-Africa 2025 Conference*, Nairobi, Kenya.
http://www.ist-africa.org/conference2025/outbox/ISTAfrica_Paper_ref_25_14351.pdf
9. Agata, E., & **Kibet, A.** (2025). Trans-border data flows and AI innovation: Challenges in the data localization landscape—A Kenyan perspective. In M. Cunningham & P. Cunningham (Eds.), *Proceedings of the IST-Africa 2025 Conference* (pp. 1–10). IST-Africa Institute and IIMC. http://www.ist-africa.org/conference2025/outbox/ISTAfrica_Paper_ref_171_14439.pdf
10. Too, W. K., & **Kibet, A.** (2025). The defensive cyber security readiness model for higher education. *International Journal of Innovative Science and Research Technology*, 10(3), 1763–1771.
<https://doi.org/10.38124/ijisrt/25mar1158>
11. Waweru, E., Karume, S. M., & **Kibet, A.** (2025). A review of human vulnerabilities in cyber security: Challenges and solutions for microfinance institutions. *Journal of Information Security*, 16(1), 114–130.
<https://doi.org/10.4236/jis.2025.161006>

12. Biegon, C. K., **Kibet, A.**, & Kahonge, A. M. (2023). Preserving privacy: How governments and digital services can harness zero-knowledge proofs for secure identification. *Innovative Systems Design and Engineering*, 14(4). DOI: 10.7176/ISDE/13-2-06
13. **Kibet, A.**, Karume, S., & Masese, N. (2022). Functional testing on a software model for creating a stable cryptocurrency using fiat currency for global electronic commerce. *International Journal for Research in Applied Science and Engineering Technology*, 10(10). <https://doi.org/10.22214/ijraset.2022.46682>
14. **Kibet, A.** (2022). Design of a model for creating a stable cryptocurrency using fiat currency for global electronic commerce. *International Journal of Computer Science and Information Security*.
15. **Kibet, A.**, Karume, S., & Masese, N. (2022). Towards next-generation cryptocurrency for global electronic commerce. *World Journal of Engineering Research and Technology*, 8(7), 1–16. https://www.wjert.org/admin/assets/article_issue/54062022/1656504615.pdf
16. **Kibet, A.** (2019). Designing a blockchain-based smart contract model: A case of the real estate industry. *International Journal of Advanced Research in Computer Engineering and Technology*, 8(8), 327–334. https://www.academia.edu/40443755/Designing_A_Blockchain_Based_Smart_Contract_Model_A_Case_of_Real_Estate_Industry
17. **Kibet, A.**, Thiga, M. M., & Karume, S. M. (2019). Towards a blockchain-based smart contracts model design for housing market applications. *International Journal of Advanced Research in Computer Engineering and Technology*, 8(8), 318–326. https://www.academia.edu/40443756/Towards_A_Blockchain_Based_Smart_Contracts_Model_Design_For_Housing_Market_Applications
18. **Kibet, A.** (2019). Investigation of stakeholders' involvement and awareness on viability of a cashless system of payment for public transport in Kenyan cities. *International Journal of Advanced Research in Computer Engineering and Technology*, 8(8). https://www.academia.edu/40443754/Investigationofstakeholders_Investigation_of_stakeholders_involvement_and_Awareness_on_Viability_of_Cashlite_system_of_payment_for_public_transport_in_Kenyan_Cities
19. **Kibet, A.**, & Karume, S. M. (2018). A synopsis of blockchain technology. *International Journal of Advanced Research in Computer Engineering and Technology*, 7(11), 789–795. https://www.researchgate.net/publication/335480185_A_quick_synopsis_of_blockchain_technology

b. Book and Book Chapters

1. **Kibet, A.**, & Makupi, D. (2019). *Determining the impact of information systems security factors on university information security maturity*. Lambert Academic Publishing. ISBN 978-620-0-29420-3.

F. Project/Thesis Supervision: MSc and PhD (Graduated)

1. Blockchain-Based Ride-Sharing Model with Decentralized Governance. **MSc** by **Biegon Kipkoech Collins** (University of Nairobi, 2023).
2. AI-Driven Edge Security Algorithm for Real-Time Attack Detection and Mitigation. **MSc** by **Ruth Barasa Osukuku** (University of Nairobi, 2025).
3. A Framework for Determining the Cybersecurity Human Factor Exposure Index for Organizations. **MSc** by **Evaline Waweru** (The Co-operative University of Kenya, 2025).
4. Enhancing Credit Risk Prediction Using Machine Learning Techniques for Microfinance Institutions in Machakos County, Kenya. **MSc** by **Martin M. Kasina** (The Co-operative University of Kenya, 2025).

G. Conference Presentations

1. Presented a paper titled “*Blockchain Model for Secure Academic Transcript Transfer*” at the 6th Biennial International Conference, Laikipia University, held from 28th to 30th May **2025**.
2. Presented a paper titled “*Trans-border Data Flows and AI Innovation Challenges in the Data Localization Landscape: A Kenyan Perspective*” at the 6th Biennial International Conference, Laikipia University, held from 28th to 30th May **2025**.
3. Presented a paper titled “*Developing a Cybersecurity Human Vulnerabilities Exposure Index Model: A Comprehensive Approach to Assessing Human-Induced Cyber Threats*” at the 6th Biennial International Conference, Laikipia University, held from 28th to 30th May **2025**.
4. Presented a paper titled “*Predictive Model for Forecasting Success Rates in the Implementation of County Integrated Development Plans: A Case Study of Laikipia County*” at the 6th Biennial International Conference, Laikipia University, held from 28th to 30th May **2025**.
5. Presented a paper titled “*Enhancing Transparency and Security in Means Testing for Education Financing: A Blockchain-Based Approach*” at the IST-Africa 2025 Conference, Nairobi, Kenya, in May **2025**.
6. Presented a paper titled “*Trans-border Data Flows and AI Innovation Challenges in the Data Localization Landscape: A Kenyan Perspective*” at the IST-Africa 2025 Conference, Nairobi, Kenya, in May **2025**.
7. Presented a paper titled “*Preserving Privacy: How Governments and Digital Services Can Harness Zero-Knowledge Proofs for Secure Identification*” at the 3rd Multidisciplinary Conference, University of Kabianga, held in March **2023**.
8. Presented a paper titled “*Building Digital Resilience through Education: Integrating Secondary*”

School Learners into Kenya's National Cybersecurity Strategy” at the 20th JKUAT Scientific, Technological and Industrialization Conference and Exhibition, held from 26th to 27th March **2026**.

9. Presented a paper “*A systematic review of cryptocurrency Weaknesses*” at the 9th Annual International Scientific Research Conference, Kenya Methodist University, Kenya, held from 6th to 7th July **2022**.

H. Consulting for External Academic/Professional Organizations

1. External Examiner of Postgraduate Thesis/Project Examiner
 - a. Kabarak University
 - b. Cooperative University of Kenya
2. Ministry of Education, Kenya. Technical Working Committee on the Development of a Scientific Model for Validation of University Programme Capacities Period: May 2026 – Present | Role: Member
3. Office of the President – National Committee on the Review of the New University Education Funding Model Period: Sep 16, 2024 – Present | Role: Secretariat Member
4. Education Development Trust (EDT): Technical Consultancy Support for the Review and Refinement of Kenya's New Higher Education Funding Model for the Ministry of Education
5. Member – National Technical Taskforce on Means Testing Instrument (MTI)
6. Participated in the review and enhancement of the Means Testing Instrument to improve equity, transparency, and efficiency in education financing.
7. National Cybersecurity Trainer – Huawei & Communications Authority (CA)
8. Delivered national-level capacity-building programmes in cybersecurity, strengthening digital resilience and skills development across institutions.
9. County Government of Elgeyo-Marakwet – County Budget and Economic Forums (CBEFs) Period: Jan 2024 – Jan 2028 | Role: Member

I. Strategic Policy Engagements and National Assignments

1. **Regional Policy Contributor – EAC Digital Transformation and AI Strategy (2026–2031)**
Contributed to the development and validation of the East African Community Digital Transformation and AI Strategy.
2. **National AI Strategy Consultations**
Participated in national consultations on artificial intelligence policy and governance frameworks.
3. **Contributor – Kenya Digital Public Infrastructure (DPI) Roadmap**
Supported the development and validation of Kenya's Digital Public Infrastructure roadmap and implementation framework.
4. **Huawei ICT Competition – AI Innovation Track**
Served as a judge and mentor, supporting innovation and talent development in artificial intelligence.