



Bomet University College Lecturer

BIO-DATA

Name: Fredrick Akoth Odero

Date of Birth: 14 August 1979

Nationality: Kenyan

Religion: African Jewish

Marital Status: Married

Physical Address: Department of Mathematics and Computer Science

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CAREER OBJECTIVE

To be a globally competitive scholar in Computing and Technology.

AREAS OF RESEARCH INTEREST

- Information Systems and Technology in Governance
- Computational Modelling
- Software Construction
- Big Data Analytics and Artificial Intelligence (AI)
- Data Science and Machine Learning

ACADEMIC QUALIFICATIONS

2024: Ongoing PhD (Information Systems & Technology), University of KwaZulu-Natal, South Africa.

Supervisor: Prof. Irene Govender—Professor of IS&T

Thesis Title: *A decision model for selecting and prioritizing information systems projects for Kenyan state corporations*

2004-2006: Master of Science (MSc) Information Systems

Awarding Institution: University of Sunderland (UK)

Dissertation Title: *A decision support system for information management and decision-making for Nairobi Institute of Technology*

1998-2002: Bachelor of Science (Physics) - Upper Second Class Honours

Awarding Institution: Jomo Kenyatta University of Agriculture and Technology (JKUAT)

1993-1996: Kenya Certificate of Secondary Education (KCSE)

School: Koderobara Secondary School

1992: Kenya Certificate of Primary Education (KCPE)

School: God-Kado Primary School

PROFESSIONAL APPOINTMENTS

- **August 2021 to Date:** Lecturer of Computing and Technology in the Department of Mathematics and Computer Science, Bomet University College (*A Constituent College of Moi University*).

Duties and Responsibilities

- Teaching, training, and assessing students in Computer Science/Information Technology/Information Systems
- Carrying out academic counselling to students in Computer Science/Information Technology/Information Systems

- Carrying out research in Computer Science/Information Technology/Information Systems
- Taking part in community service programmes
- Taking part in continuous learning programmes
- Carrying out any other duties as may be assigned by the Principal or his/her designate

- **May 2014 to April 2019:** Assistant Lecturer in the Department of Mathematics and Informatics, Taita-Taveta University.

Duties and Responsibilities

- Teaching, training, and assessing students in Computer Science/Information Technology/Information Systems
- Carrying out academic counselling to students in Computer Science/Information Technology/Information Systems
- Carrying out research in Computer Science/Information Technology/Information Systems
- Taking part in community service programmes
- Taking part in continuous learning programmes
- Carrying out any other duties as may be assigned by the Principal or his/her designate

- **March 2013 to May 2014:** Assistant Examinations Officer, Taita-Taveta University College

Duties and Responsibilities

- Setting up Examinations Master Time Table in liaison with the Registrar (Academic, Research and Outreach)
- Supervising the typing and formatting of University College Examinations
- Coordinating invigilation and supervision of University College Examinations

- **October 2013 to September 2014:** College ICT Manager (HOD)
 - Advising the Principal on hardware, software, data management, and networking and telecommunications technology requirements for the University College
 - Reporting to the Principal the status of the University College ICT infrastructure, computer hardware, and software

- Liaising with ERP and Internet Service Providers to ensure the best service is rendered to the University College at all times
- Liaising with ERP service providers on support and maintenance services
- Carrying out regular maintenance of University College ICT equipment
- Carrying out staff training from time to time on appropriate technologies that aid teaching, research and administrative functions
- Assigning duties and supervising ICT staff
- Formulating and developing the College ICT policy.

▪ **April to October 2013:** Acting University College ICT Manager (HOD)

Duties and Responsibilities

- Advising the Principal on hardware, software, data management, and networking and telecommunications technology requirements for the University College
- Reporting to the Principal the status of the University College ICT infrastructure, computer hardware, and software
- Liaising with ERP and Internet Service Providers to ensure the best service is rendered to the University College at all times
- Liaising with ERP service providers on support and maintenance services
- Carrying out regular maintenance of University College ICT equipment
- Carrying out staff training from time to time on appropriate technologies that aid teaching, research and administrative functions
- Assigning duties and supervising ICT staff.

▪ **February 2013 to May 2014:** Tutorial Fellow in the Department of Mathematics and Informatics, Taita-Taveta University College (*A Constituent College of Jomo Kenyatta University of Agriculture and Technology*).

Duties and Responsibilities

- Teaching, training, and assessing students in Computer Science/Information Technology/Information Systems
- Carrying out academic counselling to students in Computer Science/Information Technology/Information Systems

- Carrying out research in Computer Science/Information Technology/Information Systems
- Taking part in community service programmes
- Taking part in continuous learning programmes
- Carrying out any other duties as may be assigned by the Principal or his/her designate

- **October 2008 to November 2012:** Tutorial Fellow in the Institute of Computer Science and Information Technology, JKUAT Taita-Taveta Campus.

Duties and Responsibilities

- Teaching, training, and assessing students in Computer Science/Information Technology/Information Systems
- Carrying out academic counselling to students in Computer Science/Information Technology/Information Systems
- Carrying out research in Computer Science/Information Technology/Information Systems
- Taking part in community service programmes
- Taking part in continuous learning programmes
- Carrying out any other duties as may be assigned by the Principal or his/her designate

- **June 2009 to November 2012:** Attachment and Academic Trips Coordinator, JKUAT Taita-Taveta Campus

Duties and Responsibilities

- Preparing yearly schedules for attachment and academic trips
- Preparing communications to potential organizations
- Implementing academic trips
- Preparing and communicating reports related to attachment and academic trips to the Head of Department (HOD)

- **June 2011 to September 2012:** ICT Consultant with the National Economic and Social Council (NESC), Office of the President of the Republic of Kenya.

Duties and Responsibilities

-Provide a roadmap for the development of strong brand recognition for the Kenyan ICT sector through:

- Profiling and marketing
- Conferences and workshops
- ICT Excellence Awards
- Establishment of the Kenyan ICT Website and Newsletters
- ICT demonstration projects

- **April 2011 to December 2012:** Founding Manager, JKUAT ICT Consultancy Centre (HOD).

Duties and Responsibilities

-Preparing a business plan for the establishment of the ICT Consultancy Centre at Nairobi CBD Campus

-Bidding for and sourcing ICT Consultancy work from Government Ministries Departments and Agencies (MDAs) and other potential clients

-Coordinating software development and hardware assembly teams to deliver on projects timeously

-Advising the Director of Nairobi CBD Campus on technologies for effective online service delivery

-Representing the University in local and international ICT conferences and showcasing the products of the Consultancy Centre.

- **February-October 2011:** Member of the ICT Cluster Taskforce, Ministry of Information and Communications.

Duties and Responsibilities

-Identifying existing cluster-like formations in the ICT sector

-Conducting a study to establish the ICT value chain in Kenya and globally

-Conducting SWOT analysis to establish priority areas

- Identifying and evaluating factors that will impact the Kenyan ICT sector over the next decade
- Recommending specific contributions to be made by every stakeholder in the triple helix model, i.e., government, industry/non-state organizations, academia, research institutions and development partners towards the development of the ICT sector in Kenya.
- Preparing a report on the items outlined in the Terms of Reference (TOR).

- **August 2008 to September 2010:** Director at Inspace Creative Ltd and Project Manager, Air Transport Management System.

Duties and Responsibilities

- Overseeing the day-to-day running of the company
- Liaising with clients to provide the best IT solutions
- Coordinating software development teams
- Implementing thin-client solutions to Kenyan and regional clients

- **September 2004 to May 2021:** Part-Time Lecturer at:
 - ❖ JKUAT-Institute of Computer Science and Information Technology (ICSIT)
 - ❖ JKUAT Karen and Nairobi Campuses
 - ❖ JKUAT Nakuru Campus
 - ❖ United States International University (USIU)
 - ❖ Mt. Kenya University (MKU)
- **May 2004 to February 2007:** Tutor in Information Technology (IT) and Coordinator of the JKUAT IT Programmes at the Nairobi Institute of Technology (HOD)

Duties and Responsibilities

- Coordinating JKUAT IT Programmes
- Lecturing IT Programmes Full-Time and Part-Time
- Carrying out such other management duties as assigned by the Principal.

- **January to December 2003:** Deputy Principal and Teacher of Mathematics and Physics at Taph Academy-Nairobi.
 - Preparing lesson plans and Teaching Mathematics and Physics (Form I-Form IV)
 - Setting, administering and marking mid-term and end-of-term exams
 - Invigilation of the Kenya Certificate of Secondary Education (KCSE) Examination
 - Supervising teaching activities
 - Performing any other duties assigned by the Principal.
- **November to December 2003:** KCSE Invigilator at Consolata School, Westlands, Nairobi.

Duties and Responsibilities

-Invigilating KCSE Examination

- **January to March 2001: Library Assistant at JKUAT**

Duties and Responsibilities

-Cataloguing and shelving of books and journal articles
-Assisting library users locate reference materials
-Organizing the Newspaper reading section

OTHER PROFESSIONAL APPOINTMENTS

- **April 2011:** Member of the Executive Board of the Pan African Competitiveness Forum-Kenya Chapter.
- **December 2010:** ICT Cluster Strategy Facilitator (CSF).
- **January 2005 to February 2007:** Team Leader, JKUAT-CEP Examinations Board.
Area of Specialization: Programming and Software Development.
- **August to December 2007:** Resource Person for the Taskforce constituted for the National Industrial Training Council on modernising DIT training facilities and equipment for Kenya's six DIT training centres.
Area of Consultancy: Acquisition of Computer-Aided Design (CAD) Software.
- **January 2007 to September 2008:** Director in charge of Research, Outsourcing and E-solutions at **Inspace Creative** (A Kenyan-based ICT firm that provides e-solutions in Business Software Development, Database-driven Websites, e-cards, digital animation

and motion graphics, graphic design, and Information Systems Consultancy). **Team Leader, Backend Developer.**

- **July 2007 to July 2017:** University of Sunderland Alumni Association-Kenya Chapter Chairman.

RESEARCH AND INNOVATION

Odero, F. A. (2009) “Software Application for Managing Air Transport Operations in the Civil Aviation Authorities for the East African Community Partner States.” *This was a live Technology demonstration of the Air Transport Management System (ATMS) done at the East African Community Civil Aviation Safety and Security Oversight Agency Symposium held at Naura Springs Hotel in Arusha, Tanzania on 22nd and 23rd October 2009. (Demonstration of an Innovation)*

Odero, F. A. (2009) “Concept Paper and Business Plan for Establishment of ICT Consultancy Centre at JKUAT Campuses”. *The paper was presented to the University Management Board (UMB) on 8th June 2009. It was adopted and the first centre was set up at the Nairobi CBD Campus.*

Odero, F. A., Onyach, S. O. (2008) “Design, development, and deployment of Air Transport Management System using open source software”. *This was a software development project which was undertaken to solve the current challenges that face the civil aviation authorities in the East African Region. The project was completed and the first version of the application software developed is in use at the Kenya Civil Aviation Authority. It can be accessed at <http://www.kcaa.or.ke/atms>. (Innovation).*

Odero, F. A. (2004) “Internet and Computer Culture: A Case Study of Jomo Kenyatta University of Agriculture and Technology”. *Paper presented at JKUAT ICSIT in April 2004 and Submitted to the University of Sunderland (UK).*

Odero, F. A. (2005) “COCOMO 2.0: A Significant Advance in Software Development Effort Estimation Method”. *Paper Submitted to University of Sunderland (UK).*

Odero, F. A. (2006) “Comparison and Evaluation of Relational, Object-Relational, and Object-Oriented Data Models. *Paper Submitted to University of Sunderland (UK)*.

Odero, F. A., Lejk, M* (2006) “The Application of MIS and DSS in Information Management and Decision Making”. *MSc CBIS Research Project*.

* Dr. Mark Lejk: M.Sc. Project Supervisor.

SELECTED UNIVERSITY COURSES TAUGHT AND SUPERVISED

- Mathematics for Computer Science
- Spectrum Management
- Advanced Database Systems and SQL
- Object Oriented Programming (C++, Python)
- Formal Methods and Automata Theory
- Decision Analysis and Information Systems
- Advanced Computer Applications
- Network Systems Engineering
- Software Engineering
- Software Project Management
- Data Mining and Data Analytics
- Digital Electronics
- Computer Architecture
- Introduction to Neural Networks and Artificial Intelligence
- Machine and Assembly Language Programming
- Software Construction
- Web Technologies
- Oracle Programming (PL/SQL)
- Data Analysis using SPSS
- Information Systems Security
- Computer Science & IT Project
- Data Structures and Algorithms

RECENT CONFERENCES/TRAINING/SEMINARS/WORKSHOPS ATTENDED

- ***Public Innovation, Development and Sustainability*** (by the University of KwaZulu-Natal). Garden Court Marine Parade, Durban, South Africa. 24-25 October 2024.
- ***The International Research Summer School for PhD on e-Participation and Policy Modelling in South Africa (ePPMOSA) 2024***. Sponsored by the Department of Science and Innovation (South Africa), the University of KwaZulu-Natal, the Human Sciences Research Council, the Council for Scientific and Industrial Research (CSIR), and the South African Local Government Association (SALGA). Howard College Campus, University of KwaZulu-Natal, Republic of South Africa. 1st–10th July 2024.
- ***Informed Consent in Scientific Research***. Sponsored by the European and Developing Countries Clinical Trials Partnership (EDCTP). 6th June 2024.
- ***AI in Higher Education: Navigating Ethical Waters***. Sponsored by the University of KwaZulu-Natal, College of Agriculture, Engineering and Science. 3rd June 2024.
- ***Introduction to Research Ethics***. Sponsored by the European and Developing Countries Clinical Trials Partnership (EDCTP). 31st May 2024.
- ***Cyber Security Awareness Training for the Public Sector Workforce Cohort 7***. Sponsored by the Kenya ICT Authority. 23rd-25th April 2024.
- ***Embracing AI-Powered Pedagogy in Higher Education***. Research Seminar hosted by the University of KwaZulu-Natal, Discipline of Information Systems & Technology. 17th April 2024.
- ***Practical Integration of Generative AI into Teaching and Learning***. Webinar Sponsored by the University of KwaZulu-Natal. 20th March 2024.
- ***Understanding Plagiarism Online Short Course***. Sponsored by the University of KwaZulu-Natal. February 2024.
- ***Greening Africa into Prosperity***. DAAD Alumni Workshop Sponsored by DAAD and Bomet University College. 25th-27th October 2023.
- ***KENET Research Outreach Engagement Forum: Kisumu Region***. Sponsored by KENET. 26th May 2023.

OTHER SELECTED CONFERENCES/SEMINARS/WORKSHOPS ATTENDED

- ***Principles and Practices of Academic Peer Review (HEQF Level 10).*** University of KwaZulu-Natal, South Africa. 23rd June 2015.
- ***The Sixth International Conference on Information and Communication Technologies and Development (ICT4D 2013).*** University of Cape Town, South Africa. 7th-10th December 2013.
- ***IST-Africa Annual Conference 2012.*** Kunduchi Beach Hotel, Dar-es-salaam, Tanzania. 15th-16th November 2012.
- ***Pan African Competitiveness Forum (PACF), Entebbe, Uganda.*** February 2011
- ***Cluster Facilitators Workshop.*** Sponsored by the National Economic Social Council (NESC), Office of the Prime Minister, Ministry of Information and Communication, Ministry of Industrialization, Kenya Vision 2030 Secretariat, and KIPPRA. Kenya School of Monetary Studies (KSMS). 5th to 8th December 2010.
- ***ICT4D Conference: Southern Sudan 2010, Connectivity for Communications, Commerce and Governance.*** Nyakuron Cultural Centre, Juba, Southern Sudan. 23rd-24th November 2010.
- ***East African Community Civil Aviation Safety and Security Oversight Agency (CASSOA) Aviation Symposium to Commemorate the 10th Anniversary of the East African Community.*** Arusha, Tanzania. 22nd -23rd October 2009.
- ***The 1st East African Investment Conference.*** Serena Hotel, Kigali, Rwanda. 26th -28th June 2008
- ***9th Strathmore University ICT Conference: ICT's Role Towards a Knowledge Economy.*** Strathmore University, Nairobi, Kenya. 5th -6th September 2008,.
- ***Seminar for the JKUAT Approved Centres Organised by the JKUAT Continuing Education Programme (CEP).*** Utalii Hotel, Nairobi, Kenya. 6th October 2005.

ACADEMIC AND PROFESSIONAL AWARDS

- Award of Academic and Professional Merit-Taita Taveta University College (*A Constituent College of JKUAT*). *6th June 2011*.
- International Honour Award in ICT from the Commonwealth Telecommunications Organisation (CTO). *24th November 2010*. Juba, South Sudan.
- Vice Chancellor's Commendation. *June 2010*.

SCHOLARSHIP AND BURSARY AWARDS

- UKZN Doctoral Fee Remission & Bursary. **Value: R183636**
- Commonwealth Scholarship Award for MSc Computer-Based Information Systems, University of Sunderland (UK). 2004-2006. **Value: £5400**
- Higher Education Loans Board (HELB). 1998-2001. **Value: KSh 125,000**

MEMBERSHIP OF PROFESSIONAL BODIES

- Permanent Member of the Computer Society of Kenya (CSK)
Member No: 134530

HOBBIES

Reading, travelling, playing table tennis and darts, and watching documentaries.

REFEREES

1. Prof. Irene Govender

Full Professor of Information Systems & Technology

University of Kwazulu-Natal, Westville Campus

Durban, South Africa.

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2. Dr. (Arch.) Caleb Toroitich

Department of Landscape Architecture

Jomo Kenyatta University of Agriculture & Technology

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Signed:

A handwritten signature in blue ink, appearing to read 'Amunel', with a large circular flourish at the beginning.