



Dr. Shadrack Maina Mambo

CURRICULUM VITAE

1.1 Personal Profile

1.1.1 Personal Details:

Name: Shadrack Maina Mambo

PF No. : 7025

Department: Electrical & Electronics Engineering

Designation: Lecturer

Email: mambo.shadrack@ku.ac.ke

Cellphone: 0722901229

Area of Specialization:

- Electronics Engineering
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Research Interests:

- Digital Image Processing
- Digital Signal Processing

Google Scholar:

ORCID ID: 0000-0003-1905-2495

1.1.2 Academic & Professional Qualifications

- PhD in Engineering: Electrical, 2019, Universite Paris Est Creteil , Paris, France.
- D'Tech in Engineering: Electrical, 2019, Tshwane University of Technology, South Africa.
- MSc. in Radio Engineering (Electronics), 1991, Odessa National Polytechnic University, Ukraine.
- Graduate Engineer: Engineers Board of Kenya (EBK), B1973.
- Member: Institute of Engineers of Kenya (IEK).
- IEEE Member: 93168564

- Registered by Communications Commission of Kenya as Telecommunications Engineer Class “A”.

1.1.3 Employment History

- Oct 2019 to Date: Dean, School of Engineering & Technology, Kenyatta University.
- March 2013 to Sept 2019: Lecturer, Electrical & Electronics Engineering Department, School of Engineering & Technology, Kenyatta University.
- Aug 2010- Feb 2013: Dean, School of Engineering & Technology, Kenyatta University.
- Sept 2008 – July 2010: Lecturer & Chairman, Electrical & Electronics Engineering Department, Kenyatta University.
- Jan 2006 – Aug 2008: Lecturer, Computing and Information Technology Department, School of Engineering & Technology, Kenyatta University.
- May 2006 - 2008: Part-time Lecturer Jomo Kenyatta University of Agriculture & Technology (JKUAT).
- Nov. 2004 to March 2006: Technical Manager – Integrated Security Services, G4S Security Services Kenya Ltd.
- Feb. 2001 - Oct. 2004: Technical Sales Manager, Acomex International Ltd.
- Oct. 1996 - Jan 2001: Sales & Technical Manager Corrington Business Systems.
- July 1993 - Sept. 1996: Siemens Communication Ltd. (Formerly Eastern Telecommunications Ltd).
- Nov. 1992 - June 1993: Assistant Electronics Engineer Ministry of Research, Technical Training and Technology, Kenya Industrial Property Office (KIPO).

1.1.4 Achievements:

- Awarded scholarship for a Master’s degree program by USSR Government 1985.

- Founding Chairman, Electrical & Electronics Engineering Department, School of Engineering & Technology.
- Accreditation of 3 No. engineering degree programs.
- Awarded scholarship for doctorate degree program by South African Government, 2013.

1.2 Publications

1.2.1 Referred Journals

- **Mambo, S.F.M.;** Djouani, K.; Hamam, Y.; van Wyk, B.J. and Siarry, P., A Review on Medical Image Registration Technique, International Journal of Computer and Information Engineering, published by World Academy of Science, Engineering and Technology, Vol: 12, No:1, 2018.
- **Mambo, S.F.M.;** Djouani, K.; Hamam, Y.; van Wyk, B.J. and Siarry P., Medical Image Registration using Regular Step Gradient Descent Optimisation Technique, International Journal of Imaging Systems and Technology, STATUS: UNDER REVIEW.

1.2.2 Reviewed Conference Papers

- **Mambo, S.F.M.;** Djouani, K.; Hamam, Y.; van Wyk, B.J. and Siarry, P. A Review on Medical Image Registration Techniques: January 15-16, 2018, : 20th International Conference on Image Processing: Zurich ICIP 2018, Switzerland.
- **Mambo, S.F.M.;** Djouani, K.; Hamam, Y.; van Wyk, B.J. and Siarry, P. Lung CT Image Registration using Regular Step Gradient Descent Optimization Algorithm: 5th-6th November, 2015, International Conference on Communication and Information Processing (ICCIP 2015), Tokyo, Japan.
- Draft Energy Policy Stakeholders Conference, at Kenya School of Monetary Studies, Nairobi sponsored by Ministry of Energy, Government of Republic of Kenya, Nairobi, Kenya.
- 21st to 24th March, 2012, 1st International Research Methods Conference, Strathmore University, Nairobi, Kenya.
- 25th -27th January, 2012, National Alcohol and Drug Abuse Conference, Kenya Institute of Administration, Lower Kabete, Nairobi, Kenya.

- 21-23rd November, 2011 Workshop for Generic Biomedical Engineering Curriculum sponsored by United Nations Economic Commission for Africa, at Birchwood Hotel, Johannesburg, South Africa.
- 24-25th November, 2011 Conference of Vice-chancellors and Deans of Schools of Engineering & Technology COVIDSET, at Birchwood Hotel, Johannesburg, South Africa sponsored by UNESCO.

1.2.3 Short Communication in Journals

- Article in Kenya Engineers
- Article on the Development of Engineering Training at Kenyatta University in 40 Years of Progress in Kenya, pages 122 and 123; published by Intercontinental Publishers Ltd.
- Article on Computerized Water-proof – Level Monitoring System, Journal of the Institution of Engineers of Kenya; Volume 34, No.1; January / February 2013, pages 46 and 47.

1.2.3 Consultancy and Project Reports

- Lead a technical team of 5 engineers appointed by the Vice-Chancellor of Kenyatta University with the mandate to evaluation of electrical power consumption at various installations within the main campus, and gave solutions and recommendations on areas of power losses which resulted in reduction of monthly electrical power bill by over 35 percent, 2010.
- Biomedical Engineering Innovator Summer School, at Makerere University and Kyambogo University College of Technology, Kampala Uganda, 2012.
- African Virtual University (AVU) Workshop on Policy & Curriculum Conceptualization, Intercontinental Hotel, Nairobi, Kenya, 2012.
- Curriculum Review Project for Undergraduate Engineering Programs, North Coast Beach Hotel, Mombasa, Kenya, 2011.
- Stakeholders Workshop on Review of Curricula for the Engineering Programs of the School of Engineering & Technology, Kenyatta University, held at Ole Sereni Hotel, Nairobi, Kenya, 2011.
- Project on Biomedical Engineering Curriculum Development for 5 African Universities (Addis Ababa University, University of Malawi, University of

Zambia, University of Nairobi, Kenyatta University) at Birchwood Hotel, Johannesburg, South Africa sponsored by UNECA, 2011.

- Pan-African Universities Project on Postgraduate Engineering Curriculum Development for the Eastern Region- PAUIST, Kenya School of Monetary Studies, Nairobi, Kenya, 2011.

1.2.4 Editorship of a Book or Conference Proceedings

- Reviewed journal paper for Nature and Biologically Inspired Computing (NABIC) 2017;
- Reviewed journal paper for 7th World Congress on Information and Communication Technologies (WICT 2017).

1.2.5 Scholarly Presentations at Conferences/Workshops/Seminars

- **Mambo, S.F.M.**; Djouani, K.; Hamam, Y.; van Wyk, B.J. and Siarry, P. A Review on Medical Image Registration Techniques: January 15-16, 2018, : 20th International Conference on Image Processing: Zurich ICIP 2018, Switzerland.
- **Mambo, S.F.M.**; Djouani, K.; Hamam, Y.; van Wyk, B.J. and Siarry, P. Lung CT Image Registration using Regular Step Gradient Descent Optimization Algorithm: 5th-6th November, 2015, International Conference on Communication and Information Processing (ICCIP 2015), Tokyo, Japan.

1.3 Quality Teaching, Learning and Mentorship

1.3.1 Student Evaluations

- Taught and evaluated students on various engineering subjects/units for the last 14 years at Jomo Kenyatta University of Agriculture and Technology, Kenyatta University, Tshwane University of Technology and Mancosa University.

1.3.2. Trainings at Higher Education

- Odessa National Polytechnic University, Odessa, Ukraine for Master of Science in Radio Engineering (Electronics), 1991.
- Tshwane University of Technology, Pretoria, South Africa for Doctorate degree in Electrical Engineering, 2019.

1.3.3 Ongoing Supervisions

- Supervising final year engineering projects for electrical and electronics fifth year students.

1.3.4 Supervision of Postgraduate Students

1.3.4.1 PhD

- Michael Munyao at proposal writing stage.
- Duncan Kibui at proposal writing stage.

1.4 Professional/Consultancy

1.4.1 Networks/Collaborations

- Kenyatta University versus Tshwane University of Technology
- Kenyatta University and University of Nairobi versus Kenya Tea Development Authority (KTDA)
- Kenyatta University versus Iowa State University
- Kenyatta University versus Micronet Power Systems
- Kenyatta University versus GIZ

1.4.2 Editorial Boards/Referee for Professional periodicals

- Reviewed journal paper for Nature and Biologically Inspired Computing (NABIC) 2017;
- Reviewed journal paper for 7th World Congress on Information and Communication Technologies (WICT 2017).

1.4.3 Consulting for Organizations/institutions

- Kenyatta University on engineering programs curricula
- Kenya Bureau of Standards (KEBS) on electrical measurements

1.4.4. Membership of Academic /Professional bodies

- Graduate Engineer: Engineers Board of Kenya (EBK), B1973.
- Member: Institute of Engineers of Kenya (IEK).
- IEEE Member: 93168564
- Registered by Communications Commission of Kenya as Telecommunications Engineer Class “A”.

1.5 Administrative and Responsibilities

1.5.1 Recognized university administrative positions

- Chairman of Electrical & Electronics Engineering Department 2008-2010
- Ag. Dean, School of Engineering & Technology, 2011-2013
- Ag. Dean, School of Engineering & Technology, October 2019 to date.

1.5.2 Other Responsibilities in the University

- Student Mentorship
- Member of 47th Graduation Organizing Committee

1.6 Community Engagements and Other Contributions

1.6.1 Research funding

- Applied for KENET Computer Systems Information Systems and Engineering (CS/ISE) Multi-Disciplinary Mini Grant 2019/2020.

1.6.2 Community Outreach

- Member of Rugaita Baptist Church, Kandara Sub County, Muranga County.

1.6.3 Professional Affiliation & Portfolios

- Graduate Engineer: Engineers Board of Kenya (EBK), B1973.
- Member: Institute of Engineers of Kenya (IEK).

- Institute of Electrical & Electronics Engineers (IEEE) Member: 93168564

1.6.4 Recognitions awards and honors

- Received Best Presentation Award for a conference paper presented at International Conference on Communication and Information Processing (ICCIP 2015), Tokyo, Japan.
- Awarded scholarship to study for doctorate degree by Tshwane University of Technology 2013-2018.
- Awarded scholarship to study for undergraduate and master's degree by the Union of Soviet Socialist Republics (USSR), 1985-1991.

1.6.5 Any other sub-category

- Member of Ruiru Golf Sports Club 2010 to date

1.7 Referees

- Prof. Karim Djouani;
Professor at University Paris Est Creteil, France and Tshwane University of Technology;
Email: djouanik@tut.ac.za; djouani@u-pec.fr;
Tel: +27-12 382 4809.
South Africa.
- Prof. Yskandar Hamam;
Emeritus Professor at EISEE Paris, France and Tshwane University of Technology;
Email: hamama@tut.ac.za; yskandar@gmail.com;
Tel: +27-12 382 5363.
South Africa.
- Prof. Josiah Munda;
Professor of Electrical Engineering;
Assistant Executive Dean, Faculty of Engineering and the Built Environment
Tshwane University of Technology;
Email: Mundajl@tut.ac.za
Tel: +27-12 382 5120.
South Africa.