

## CURRICULUM VITAE

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**NAME:** Elijah Mwangi

**DATE OF BIRTH:** 31<sup>st</sup> December 1956

**NATIONALITY:** Kenyan

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**KEY QUALIFICATIONS:**

BSc(Eng) First class honours, MSc, PhD, MIEE, CEng.

**(1) ACADEMIC QUALIFICATIONS:**

1983-87: Department of Electrical & Electronic Engineering, Loughborough University of Technology, UK. Research in Digital Signal Processing. Awarded PhD degree on thesis entitled, " Speaker independent isolated word recognition." Year of award: 1987.

1979-81: Department of Electrical Engineering . University of Nairobi. Postgraduate student. Awarded MSc Degree on thesis entitled. " Minimization of congestion in Telephone systems." Year of award: 1983

1975-78: Department of Electrical Engineering, University of Nairobi. Undergraduate student. Final year course units: Applied Electronics, Telecommunications, Microwaves & Antennas, Engineering Mathematics, Control Engineering, Engineering Project. Awarded: First Class Honours degree. Year of award: 1978.

**Scholarships:**

1983: Awarded a Royal Commission for the Exhibition of 1851 to study for a PhD at Loughborough University of Technology.

1979: Awarded a University of Nairobi scholarship to study for the MSc degree.

**(2) PROFESSIONAL QUALIFICATIONS:**

(i) Member of the Institution of Electrical Engineers(UK)  
Date of Registration : 23<sup>rd</sup> March 1992

(ii) Chartered Engineer (UK)  
Date of Registration: 28<sup>th</sup> January 1994

**(3) EMPLOYMENT:**

- (i) Since July 2001: Senior Lecturer, Dept of Electrical & Electronic Engineering. University of Nairobi
- (ii) June 1995-July 2001: Chairman, Department of Electrical & Electronic Engineering.
- (iii) 1991-1995: Senior Lecturer, Department of Electrical & Electronic Engineering.
- (iv) 1987-1991: Lecturer, Department of Electrical & Electronic Engineering.
- (v) 1981-1987 Graduate Assistant, Department of Electrical & Electronic Engineering.

**(4) TEACHING EXPERIENCE:**

**Undergraduate programmes:**

(Bachelor of Science in Electrical & Electronic Engineering)

Course units taught:

Digital Electronics, Analogue Electronics, Applied Electronics, Electrical Circuit Theory, Electrodynamics, Passive circuits.

Supervision:

Several final year projects and laboratory work for various classes.

**Postgraduate programmes:**

Supervisor for the underlisted thesis.

Title: Multipulse excitation linear predictive coding of speech signals.

Student: W N Mwema

Institution: University of Nairobi

Year: 1993-94.

**(5) RESEARCH EXPERIENCE:**

2001: On going research in the following areas:

- (i) The use of operational transconductance amplifiers for use in active filters.
- (ii) Design of adaptive IIR filters.

1993-94: Research in speech coding as an MSc Thesis supervisor:  
Outcome: Research paper presented in the Africon '96 conference

1983-87: Research in Speech recognition for purpose of the award of the PhD degree at Loughborough University.  
Outcome: award of PhD thesis, and publications in journal and conferences.

**(6) CONSULTANCY:**

- (i) 1998: Computer Consultant: Training of the Kenya Tea Development Authority Computer Staff.
- (ii) 1994-95: Computer Consultant: Gilgil Telecoms Industry computer assembly.
- (iii) 1991-1993: Chief Consultant: Identification and valuation of the Engineering assets of the Kenya posts & Telecommunications corporation.
- (iv) 1993: Consultant. Re-structuring of the Kenya Port Authority.

**(7) PUBLICATION RECORD:**

- (i) E Mwangi: Current mode feedback analogue filter triple OTAs and grounded capacitors. Submitted for publication. November 2001.
- (ii) E Mwangi: *Foundations of Digital Electronics*. A book submitted to the University of Nairobi press. 1998. 360pp
- (iii) W N Mwema & E Mwangi: 'A spectral subtraction method for noise reduction in speech signals.' IEEE Conference proceedings. AFRICON'96. September 1996. Cape Town, RSA. pp 567 - 571
- (iv) E Mwangi: 'On the use of acoustic segmentation in isolated word recognition.' Proceedings of the 4<sup>th</sup> Australian International conference on Speech Science and Technology. Brisbane. December 1992. pp454-459.
- (v) E Mwangi: 'A Computationally efficient pattern matching based isolated word recognition system.' ITU 1<sup>st</sup> World media symposium . Geneva, Switzerland. October 1989. pp457-461.
- (vi) E Mwangi: 'On the use of filter bank energy features in isolated word recognition'. Innovation & Discovery. A Journal of the African Academy of Science. 1988.
- (vii) E Mwangi & C S Xydeas: 'The use of phoneme-like templates in isolated word recognition without time alignment.' Proceedings of the European signal processing conference. EURASIP'86. The Hague, Holland. . September 1986. pp561-56
- (viii) E Mwangi & C S Xydeas: 'Voiced, Unvoiced, and silence classification of speech signals using the Fuzzy set theory.' Proceedings of the IEEE Mediterranean Electrotechnical conference (MELECON). Spain, October 1985. pp123-126.
- (ix) E Mwangi & A V Otieno: Minimization of Congestion in the Nairobi city local telephone system. Kenya Journal of Science and Technology Series A (pp3-17. 1984.

**(8) INVOLVEMENT IN WORK ENVIRONMENT:**

1995-2001: Chairman of the Dept of Electrical & Electronic Engineering  
Duties:

- (i) Administration of the academic programmes in the Electrical & Electronic Engineering Dept.
- (ii) Providing academic leadership to teaching staff and guidance to students.
- (iii) Development of new courses and the updating of the teaching curriculum.

**(9) REFEREES:**

(1) Prof F W O Aduol  
College of Architecture and Engineering  
University of Nairobi

(2) Prof A V Otieno  
Electrical & Electronic Engg Dept  
University of Nairobi

(3) Prof R O Genga  
Physics Dept, University of Nairobi.