

## CURRICULUM VITAE

**DR.EDWARD GACHANGI NJENGA.**

**MARITAL STATUS:** MARRIED WITH THREE CHILDREN.

**DATE OF BIRTH:** 04-06-1960.

**NATIONALITY:** KENYAN.

**HOME TELEPHONE NO:**0722847131

**EMPLOYMENT:**DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE, KENYATTA UNIVERSITY.

**DATE OF FIRST APPOINTMENT:** OCTOBER,1983.

**CURRENT STATUS:** SENIOR LECTURER.

### **UNIVERSITY EDUCATION AND QUALIFICATIONS.**

1978-1981 Bachelor of science (1<sup>st</sup> class honours) **PANJAB UNIVERSITY , INDIA.**

1981-1983 Master of science in Statistics. **PANJAB UNIVERSITY, INDIA.**

1986-1987 Master of science in Statistics(with applications in medicine), **SOUTHAMPTON UNIVERSITY, UNITED KINGDOM.**

1987-1990 Doctor of Philosophy in Mathematics(statistics) **SOUTHAMPTON UNIVERSITY, UNITED KINGDOM.**

**RESEARCH INTERESTS:** BIostatistics,SAMPLE SURVEYS, SURVIVAL ANALYSIS, DEMOGRAPHY, ECONOMETRICS.

### **PROFESSIONAL EXPERIENCES.**

- Appointed Assistant lecturer in the department of Mathematics, Kenyatta university in 1983.
- Appointed Tutorial fellow in the department of Mathematics, Kenyatta university in 1984
- Appointed a writer of statistics units of External degree programme of the University of Nairobi in 1986.
- Promoted to the post of Lecturer in the department of Mathematics, Kenyatta university in 1988.
- Elected a fellow of the Royal statistical society of the United kingdom in 1990.
- .Participated in the writing of the Mathematics curriculum of Catholic university of East Africa.
- Promoted to Senior Lecturer in the department of Mathematics, Kenyatta university in 1992.
- Appointed a resource person by the Commission of higher education to assess Mathematics Curriculum of private universities seeking to be granted Charters (2000).

### **EXTERNAL EXAMINER**

- Kenya Polytechnic between 1997-1999.
- Catholic University of Eastern Africa between 2001-2004.
- Egerton University from 2007-2017.
- Laikipia University college from 2011- to date
- Nairobi University 2012-2016.
- Chuka University 2016- to date.

### **PHD THESES EXAMINED.**

- Appointed by Catholic university of East and central Africa to examine the Phd Thesis of Mr Karoki entitled "Nonparametric model based estimation of the finite population mean using two stage cluster sampling". Graduated in June 2010.
- Appointed by Pwani University to examine the Phd Thesis of Ms Jerita Jemimah Mwambi entitled "A statistical model of teachers survival time in public schools and institutions in Kenya". Graduated in December 2017.
- Appointed by Masinde Muliro university to examine the Phd thesis of Mr David Anekeya Alilah's entitled "Estimation of domain means using double sampling with non-linear cost function in the presence of Non-response" Graduated in 2019.
- Appointed by Masinde Muliro university to examine the Phd thesis of Mr Peter Githinji Murage entitled "Optimal threshold determination for the product of spacing methodology with ties for extreme events"

## **SUPERVISION**

### **Masters of science Projects Supervised.**

- Tabitha Weru (2007) "Design based estimators of the finite population total".
- Beatrice Maina(2007) "Model based estimators of finite population total".
- Kuria (2006) "Estimation of variance of a ratio estimator.
- Kiarie Francis Mungai( 2006) "A nonparametric approach to estimation of finite population mean
- Kipruto Hillary(2006) "Comparative study of statistical association in data sets with reference to molecular marker data, phenotypic trait and Geographical data" .
- Mwangi Wachira(1993) "Robust estimation of regression coefficients in complex surveys".
- Njoroge Gladys (2009) "Estimation of the finite population mean using splines.
- Ndengo Rugengamanzi (2007) "A comparative study of some Nonparametric and parametric estimators".
- Ngandu (2009) "Horvitz -Thompson estimator of the population total as a Penalized spline model based."
- Cheruiyot Joseph(2007) "Estimation of the population total using Periodic splines."
- Waititu Hellen (2011) "Variance Estimation using Donor imputation method".
- Muriithi, Daniel Mwangi (2012) "An investigation of the effects of some social economic factors on Infant and child mortality using Cox proportional hazard model.
- Ndungu, Isaac(2012) "Over the counter diagnosis and drug dispensation by chemists In Kenya. ,
- Madegwa .j.Etyang (2014) " Application of loess procedures in modeling geothermal well discharge data."
- Wafula M.E (2016) "Parameter Estimation of the Kumaraswamy Distribution based on Progressive Type II Censoring Scheme Using E-M Algorithm."
- Muriithi D.F (2017) "Estimation of parameters of the Two-Parameter Rayleigh distribution based on Progressive Type II Censoring using Maximum Likelihood Method Via the NR and EM Algorithms.
- Mokaya, Charlotte(2019) " A modified Nadaraya-Watson estimator of the finite population mean".
- Grace Karuoya Njeri (2021) " Maximum Likelihood Estimation for a Progressively Type II Censored Generalized Inverted Exponential Distribution via EM Algorithm".

### **Masters of science Thesis Supervised.**

- Kiplimo Kibet(2013) “ A statistical study of the distribution of pediatric tuberculosis patterns in Kenya.”
- Mirasi Mboya (2014) Statistical Analysis of the determinants of maternal mortality and impact of voucher for health in Kisumu sub-county, Kenya.”
- Wilfred M. Olwende (2015) “ Factors associated with psychosis in Kenya. A case study of Mathari hospital.

### **COURSE UNITS TAUGHT.**

Probability and statistics(I,II,III,IV),Linear Algebra(I,II),Basic mathematics, Estimation theory, Test of Hypotheses, Statistical quality control, Operation research I, Nonparametric methods, Sample surveys, Applied statistics, Multivariate Analysis, Survival Analysis, Demographic Techniques, Regression methods, Quantitative methods, Analysis of statistical data, Modeling of statistical data, Calculus(I,II,III),Design and analysis of Experiments, Observational studies, Statistical Genetics.

### **ADMISTRATIVE EXPERIENCE.**

- 1992-1997 Examination officer, Mathematics Department.
- 1999-2005 Chairman, Mathematics Department, Kenyatta University, Nairobi.
- 2007-2008 Ag. Director, Institute of open learning, Kenyatta University.
- 2008-2009 Director, Directorate of Examinations, Kenyatta University.
- 2009-2015 Deputy Director, Centre for Institutional based programmes.

### **OTHER DUTIES.**

Chairman, Vice chancellor’s committee to investigate 2008/2009 Daad Postgraduate Scholarship Award.

### **BOOKS / LECTURE NOTES**

- SMA 160 Probability and statistics I, Module for Kenyatta University Open Learning, vetted, Published, (IOL), 2002
- SMA 260 Probability and Statistics II, Module for Kenyatta University Open Learning, vetted, Published, (IOL), 2014.
- “Application of loess procedure in modeling geothermal wells”. Author- Dr Gachangi Njenga and James Madegwa Etyang. Lambert Academic publishers 2016.
- ‘Estimation of parameters of the two parameters Rayleigh distribution’ Authos;Dr Gachangi Njenga and Muriithi Daniel. ISBN-13 978-620-2-19747-2. Lambert Academic publishers ,2019

### **PUBLICATIONS**

- Unpublished masters of science dissertation entitled: Regression analysis of survey data Selection effects and robustness,1987
- Unpublished Doctor of philosphy Thesis entitled: Robust estimation of regression coefficients in complex surveys.1990
- Edward G.N(1992)” Robust model based methods in analytical surveys”.*Journal of survey methodology of Canada,Vol 18,No 2 pp 1187-208,1992.*
- Edward G.N(1999) “Comparisons of estimators of regression coefficients for complex sampling designs with auxiliary information”.*East African journal of science,2(1) ,pp46-55(1999).*
- *Ndungu,K.Isaac and Dr Gachangi Njenga “ Investigation of over the counter diagnosis and drug dispensation in chemists’. A case study of Thika district,Kenya. Journal of biology and medical sciences. Vol3 (2015).*

- Wafula M.E, Kemei A.K, Edward G.N(2016).”Parameter Estimation of the Kumaraswamy Distribution based on Progressive Type II Censoring Scheme Using E-M Algorithm” *American Journal of Theoretical and applied statistics*,Vol5,No3 2016 pp154-161.
- Hellen.W,Edward Njenga.(2016).”Non-parametric Variance Estimation Using Donor Imputation method”. *American Journal of Theoretical and applied statistics*,Vol5,No5, 2016 pp252-259.
- Madegwa .j.Etyang ,Edward G.N(2016).”Application of Loess Procedure In Modelling Geothermal well Discharge Data from Menengai Geothermal Wells in Kenya”. *American Journal of Theoretical and applied statistics*,Vol5,No5, 2016 pp260-269.
- Murithi D.F,Edward G.Njenga,Kemboi G.K(2017) “Estimation of parameters of the Two-Parameter Rayleigh distribution based on Progressive Type II Censoring using Maximum Likelihood Method Via the NR and EM Algorithms”. *American Journal of Theoretical and applied Statistics Vol 6,No 1 2017 pp1-9..*
- Mokaya C and Njenga Edward “ A modified Nadaraya-Watson estimator of the finite population mean”. *American Journal of Theoretical and applied Statistics*(2019).
- Grace karuoya Njeri and Edward Njenga “Maximum Likelihood Estimation for a Progressively Type II Censored Generalized Inverted Exponential Distribution via EM Algorithm” *American Journal of Theoretical and applied Statistics*,Volume 10, Issue 1, November 2021, Pages: 14-21

#### **SEMINARS ATTENDED.**

- Pan African congress of mathematicians held in Nairobi, 1995
- International congress of Mathematicians held in Beijing, China in July - August 2002.
- International congress of Mathematicians held in Kenyatta University 2017.

#### **ACADEMIC REFEREES.**

- Professor Muthakia, Department of Chemistry ,Kenyatta university.
- Professor Rotich , Vice chancellor, Laikipia University.