DR. DAVID ANEKEYA ALILAH

PhD (Mathematical Statistics), MSc (Mathematical Statistics) B.Eds. (Science)

CURRICULUM VITAE

PERSONAL DETAILS

Date of Birth:	18TH JULY 1975
Permanent Address:	Masinde Muliro University of Science and Technology, P.O. BOX 190 50100- Kakamega, Kenya
Home Address:	P.O. BOX 34 -50101-Butere
Phone:	+254710896831, +254725336562
ID Number:	13463842
Mail:	aliladavid2010@gmail.com. , dalila@mmust.ac.ke.
Sex:	Male
Nationality:	Kenyan

CAREER OBJECTIVE

To develop and establish my career in a conducive and challenging environment, to be able to exploit my full potential and capabilities where my qualifications, knowledge and experience will be an asset to the organization.

CAREER STRENGTH

I am a self-driven, result oriented, eager team player with the ability to work under any Conditions to effectively and efficiently deliver quality and quantity performance in the Industry

EXPERTISE

1. Advanced R Programmer
2. Advanced STATA Programmer
3. GIS mapping and data visualization
4. Advanced statistical modeling and data analytics

RESEARCH INTERESTS: *Mathematical Statistics, Sample Survey, Spatial Data Modelling and Analysis, Survival Analysis, Econometrics Time Series Data Modelling and Agricultural Design and Analysis Modelling*

EDUCATION AND QUALIFICATIONS

Doctor of philosophy in Mathematical Statistics

September 2015-2018: *Masinde University of Science and Technology*

Research topic thesis: "*Estimation for Domain Mean by Double Sampling with Non-Linear Cost Function In The Presence Of Non-Response*"

Masters of Science in Mathematical statistics

2009-2011: *Kenyatta University.*

Research topic thesis: "*Effects of Response Errors on population Parameters in Double for Stratification*"

Bachelor of Education (Science)

1995-1999: *Moi University, Eldoret.*

Certificate of Proficiency in Computer Application: *Abeene Professional services*

1. *SPSS*
2. *R-Package*
3. *C++*
4. *Visual Basic Programming*
5. *STATA*
6. *Python Programming*

Kenya Certificate of Secondary Education (KCSE)

1990-1993*: Harambee Khalsa, Nakuru;*

Kenya Certificate of Primary Education (KCPE)

1981 to 1988*: Masaba Primary School, Butere*

WORK EXPERIENCE AND RESPONSIBILITIES

Appointment to National Advisory Committee member of Sector Skills Advisory Committee (SSAC) for applied Statistics-Kenya Government

To identify and advise on the competency standards to be used for curriculum development, undertake technical validation of curriculum, identify suitable practitioners to take part in competency standards development, assist review of competency standards and assessment

materials, consider industry input on continued validity of competency standards and assist training providers in identifying work placements for trainees

Examination and Timetable Coordinator, School of Natural Science July 2020-Present

Management and coordination of the school university examination and timetabling process, prepare and issuance of academic transcripts, coordination of internal and external examiners nomination, custodian of all school board and senate approved student's examination results of the school, management and generation of graduation pass lists and consolidated mark sheets

Lecturer April 2015 to Present

School of Natural Science, Department of Mathematics, Masinde Muliro University of Science and Technology

Lecture planning preparation and research, teaching advanced mathematical statistics courses, mentorship, writing research proposals, papers and publications, supervising PhD and MSc students, attending and speaking at conferences and seminars, checking and assessing student's work.

Course units taught:-

- ✓ NCN 9113: Statistics for Nursing Research- PhD Nursing Students
- ✓ STA 802: Inferential Statistics II- MSc Statistics Students
- ✓ STA 811: Sample Survey - MSc Statistics Students
- ✓ CWE 801: Statistics for Engineers-MSc Engineering Students
- ✓ Undergraduate Students:
  - ❖ Basic statistics
  - ❖ Sample Survey I &II
  - ❖ Probability and distribution models
  - ❖ Biostatistics
  - ❖ Survival Analysis
  - ❖ Design and Analysis of experiment I &II
  - ❖ Multivariate Analysis
  - ❖ Probability Theory
  - ❖ Estimation Theory
  - ❖ Test of Hypothesis
  - ❖ Econometrics Modelling
  - ❖ Regression Analysis
  - ❖ Sequential Analysis and Decision Theory

❖ Statistical Quality control and acceptance Sampling

Coordination of E-learning by use of Masinde Muliro University of Science and Technology Open, Distance and E-learning (MMUST-ODEL PLATFORM) –elearning.mmust.ac.ke

Using learning Management system (LMS) to develop online course modules, add users to the course, restrictions of the users, documentation, tracking the learners to determine completion and retention rate, designing multimedia content, uploading unit content to LMS, effectively communication with other e-learning portal users using online communication tools such as staff parlor, lecture parlor, web session by employing Big blue button, MOODLE instructions, Google Meet teams, Zoom and KENET among others. Carrying out online assessment using teacher marked assessment and computer marked assessment and generation of the Grade book

Coordinator Student Attachment and Placement Department of Mathematics-Sept 2015 to date

Coordination of students on attachment and assigning of field supervisors, establish links with industries for purpose of student attachment, to create and maintain departmental database of all students on attachment

Coordinator Departmental curriculum Review and Development

To facilitate the review and development of programs in the department

Tutorial Fellow Maasai Mara University Jan-April 2015
- ✓ To contribute towards the achievement of the Mission and vision of university
- ✓ To contribute effectively to the creation and circulation of knowledge through effective teaching, researching and publishing
- ✓ To enrich the intellectual development of students through interaction and academic counseling in my area of specialization.

Lecturer Sigalagala National Polytechnic 2013-2014

Teacher ST. Martha's Mwitoti Secondary School – 2010 up 2013
- Teacher mathematics and chemistry
- Head of Department mathematics
- Patron Science and mathematics club
- Members internal quality inspectorate committee
- Member academic committee
- Member disciplinary committee
- Class teacher 2010Form four class

Teacher Rigoko Secondary School - 2001- 2010
- Teacher mathematics and chemistry
- In charge of timetabling
- In charge of science department

- Head games department
- Patron science congress

Board of management member; Shiatsala secondary school and Mahondo secondary school

Consultancy Services;

- Baseline Survey on the HIV-AIDS Status, Masinde Muliro University

- Customer-Employee Satisfaction Survey, Gusii Water company services

- Customer-Employee Satisfaction Survey, MOSACCO.

Part-time lecturer Mount Kenya University- 2012-2014
- Business statistics
- Probability and Statistics II
- Real Analysis I
- Linear Algebra I
- Time series Analysis

Part-time Lecturer Jomo Kenyatta University 2013-2014
- Quantitative Modelling-Masters
- Business Statistics

CONFERENCES AND SEMINARS

Mathematical Modeling for Infectious Disease; Theory and Practice 2-6 Dec 2019
Jomo Kenyatta University of Science and Technology, Kenya

Practical Training on Survival Analysis for Cancer Epidemiology 21-22 October 2019
University of Nairobi, Kenya

Spatial Data Modeling: Theory and Practice 16-20 September 2019
Karatina University, Kenya

Transition, Change and Impact Awareness Training for Implementers (*Based on ISO 9001:2015*) 30th AUGUST 2018
Masinde Muliro University of Science and Technology (MMUST)

Performance Contracting Awareness Session 9th November 2015
Masinde Muliro University of Science and Technology (MMUST

Curriculum Development, Review and Implementation for Faculty of Science 24TH June 2014

RESEARCH PUBLICATIONS
1. **David Anekeya Alilah**, Robert Keli, Harun Makwata, James Kahiri, Leo O. Odongo. Effects of Response Errors on population parameters in Double Sampling for Stratification, Science journal

of Applied Mathematics and Statistics Vol 3. No. 2, 2015, pp. 27-32 doi: 10.11648/j.sjams.20150302.11

2. Maloba Joseck Joab, Priscillah M. Omagwa, Douglas Musiega , **David Alila Anekeya**, Analysis of total quality management pillars on Kenyan sugar industry, case of Nzoia sugar company limited-International journal of Business and Management Invention-ISSN(online); 2319-8023 ISSN(print) ; 2319-801X. **www.ijbmi.org**. Vol 2 issue 8

3. Maloba Joseck Joab, Priscillah M. Omagwa, Douglas Musiega , **David Alila Anekey**a, Analysis of employee qualifications and experience on selected Total Quality Management determinants. A case of Nzoia sugar company International journal of Business and Management Invention-ISSN 2321-8916 **www.ijbmi.org**. Vol 1 Issue 3

4. **Alilah David**, Construction of some resolvable t-designs. Science journal of Applied Mathematics and statistics. Vol. 5 no. 1, 2017, PP. 49-53. Doi: 10.11648/j.sjams.20170501.17

5. Chibayi John, **Alilah David**, Onyango Fredrick Construction procedure for non-trivial t-designs. American Journal of Theoretical and Applied Statistics. Vol. 6, 2016, pp.52-60.doi: 10.11648/j.ajtas.20170601.17

6. **Alilah David,** Onyango Ouma C, Nyongesa Kennedy Domain Mean Estimation Using Double sampling with Non-linear cost function in the Presence of Non-response, Science journal of Applied Mathematics and Statistics 2018:6(1):28-42 ; ISSN2376-9491(Print); ISSN:2376-9513(online)

7. **Alilah David,** Onyango Ouma C, Nyongesa Kennedy Optimal allocation in Domains Mean Estimation Using Double sampling with Non-linear cost function in the presence of Non-response, American Journal of Theoretical and Applied Statistics 2018: 7(2):45-57; ISSN:2326-8999(print); ISSN 2326-9006(online)

8. **Alilah David**, Onyango Ouma C , Ombaka E, Efficiency of Domain Mean Estimators in the Presence of Non-response Using Two-Stage Sampling with Non-linear and Linear Cost Function Annals of Data Science Springer, 2020 **:DOI: 10.1007/s40745-020-00312-x**

9. Troon John Benedict, Karanjah Anthony, **Alilah Anekeya David**. Modeling Geometric Measure of Variation About the Population Mean. American Journal of Theoretical and Applied Statistics. Vol. 8, No. 5, 2019, pp. 179-184. doi: 10.11648/j.ajtas.20190805.13

10. Troon John Benedict, Karanjah Anthony, **Alilah Anekeya David** Estimation Of Variation About The Mean Using Geometric Measure 2019 DOI: 10.13140/RG.2.2.10253.69604

11. Okumu Otieno Kevin, Edgar Otumba, **Alilah Anekeya David**, John Matuya. Fitting Wind Speed to a Two Parameter Distribution Model Using Maximum Likelihood Estimation Method. International Journal of Statistical Distributions and Applications. Vol. 6, No. 3, 2020, pp. 57-64. doi: 10.11648/j.ijsd.20200603.13

12. Etori, Naome A., and **Alilah, David A**. (2020), Impact of Knowledge Management on Organizational Performance: A Case of U.S. Retail Firms. In: Journal of Economics and Business, Vol.3, No.2, 941-946.

13. Troon John Benedict, Karanjah Anthony, **Alilah Anekeya David**. Estimating Average Variation About the Population Mean Using Geometric Measure of Variation. International Journal of Statistical Distributions and Applications. Vol. 6, No. 2, 2020, pp. 23-35. doi: 10.11648/j.ijsd.20200602.11

14. Ongoma Jackson, **Alilah Anekeya David**.. Optimal allocation in small Area Mean Estimation Using Stratified Sampling in the Presence of Non-Response. . International Journal of Statistical Distributions and Applications 7(1), March 2021. DOI:10.11648/j.ijsd.20210701.13

15. Malik Muhammad Anas , Zhensheng Huang , **David Anekeya Alilah** , Ambreen Shafqat and Sajjad Hussain, 2021. "[Mean Estimators Using Robust Quantile Regression and L-Moments' Characteristics for Complete and Partial Auxiliary Information](#)," [Mathematical Problems in Engineering](#), Hindawi, vol. 2021, pages 1-8, July. DOI: 10.1155/2021/9242895. Handle: *RePEc:hin:jnlmpe:9242895*

16. Usman Shahzad , Nadia H. Al-Noor , Noureen Afshan , **David Anekeya Alilah** ,Muhammad Hanif and Malik Muhammad Anas, 2021. "[Minimum Covariance Determinant-Based Quantile Robust Regression-Type Estimators for Mean Parameter](#)," [Mathematical Problems in Engineering](#), Hindawi, vol. 2021, pages 1-8, July. DOI: 10.1155/2021/5255839. Handle: *RePEc:hin:jnlmpe:5255839*

17. Malik Muhammad Anas, Muhammad Ali, Ambreen Shafqat, Faisal Shahzad, Kashif Abbass**, David Anekeya Alilah**, "L-Moments and Calibration-Based Estimators for Variance Parameter", *Mathematical Problems in Engineering*, Hindawi, vol. 2021, Article ID 9847714, 8 pages, 2021. https://doi.org/10.1155/2021/9847714

18. Shabnam Shazadi, Xianwen Fang and **David Anekeya Alilah**, 2021 "Role of Stochastic Petri Net(SPN)in Process Discovery for Modelling and Analysis" [Mathematical Problems in Engineering](#), Hindawi, vol. 2021,DOI:10.1155/2021/8699164.

19. Tolga Zaman, Emre Dünder, Ahmed Audu, **David Anekeya Alilah**, Usman Shahzad, and Muhammad Hanif "Robust Regression-Ratio-Type Estimators of the Mean Utilizing Two Auxiliary Variables: A Simulation Study" September 2021. Mathematical Problems in Engineering, Hindawi, 2021(2):1-9. DOI: [10.1155/2021/6383927](https://doi.org/10.1155/2021/6383927)

POSTGRADUATE SUPERVISION

MSc SUPERVISION
1. Student Name**: Troon John Benedict.** University: Maasai Mara University. Course. MSc in Statistics. Topic: *Estimation of Variation about the Mean using Geometric Measure*. **Completed 2020**
2. Student Name**: Otieno Kevin Okumu.** University: Maasai Mara University. Course. MSc in Statistics. Topic: *Fitting wind speed to a Probability Distribution Using MLE and MDE technique*. **Completed 2021**
3. Student Name**: Jackson Ongoma.** University: Masinde Muliro University of Science and Technology. Course. MSc in Statistics. Topic: *Small area Mean estimation using Stratified Sampling in the presence of Non-response.* **completed 2021**
4. Student Name**: Mercyline Cheroitich.** University: Masinde Muliro University of Science and Technology. Course. MSc in Statistics. Topic: *Estimation of Population Percentile in the Presence of Non-response.* **Ongoing Graduation 2022**

5. Student Name**: Ruth Wanga.** University: Masinde Muliro University of Science and Technology. Course. MSc in Statistics. Topic: *Modelling of HIV Prevalence in Kenya in the presence of Mediation Using a Bayesian Spatial Mediation Model.* **Ongoing**
6. Student Name**: Chepkemoi Judith.** University: Maasai Mara University. Course. MSc in Statistics. Topic: *Modelling Transition Rates to Completion of Girls in Secondary Schools in Narok North Subcounty.* **Ongoing Graduation 2021**

PhD SUPERVISION

1. Student Name**: Michael Musyoki.** University: Masinde Muliro University of Science and Technology. Course. PhD in Statistics. Topic: *Modelling the Contribution of Kenya's Agricultural Sector to National Gross Domestic Product Using VAR, VARMA, FAVAR and FAVARMA models.* **Ongoing**
2. Student Name**: Ajwang' Stellamaris Adhiambo.** University: Pan African University, Institute for Basic Sciences, Technology and Innovation (PAUISTI). Course. PhD in Statistics. Topic: *Boundary Bias Robust Estimator For a Finite Population Total..* **Ongoing**

EXAMINATION
Examined the Thesis of following candidates

1) Student Name**: Ratip Alfred Okoth.** Thesis title: *A Generalized Regression Neural Network Model for Maize Production in Trans Nzioa County.* University: Masinde Muliro University of Science and Technology. Course: MSc in Statistics

2) Student Name: **Victor Oduori.** Thesis title: *Three-Stage Adaptive Batch Testing Model for Estimating Prevalence of a Trait without Truncation.* University: Masinde Muliro University of Science and Technology. Course: MSc in Statistics

3) Student Name: **Jacinta N. Kisabuli.** Thesis title: *Intervention Time Series Modeling of Infant Mortality: Impact of Free Maternal Health Care*. University: Masinde Muliro University of Science and Technology. Course: MSc in Statistics

SOCIETY AND ASSOCIATION MEMBERSHIP

1. Member, Kenya National Statistical Society (**KNSS**), **REG NO. KNSS-00181**
2. Member, International Biometric Society **(IBS), Member ID NO. 1293203**

SOFTWARE
1. Geographical Information System
2. MATLAB
3. R-package
4. STATA

5. SPSS
6. Advanced Excel
7. C++
8. Python
9. Visual Basic Programming

REFEREES

1. DR. JOSEPH OWINO
   DEAN SCHOOL OF NATURAL SCIENCE (SONAS)
   MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY
   P.O.BOX 190-50100 KAKAMEGA KENYA
   CELLPHONE: **+254721257142**
   Email: jowino@mmust.ac.ke.

2. DR. FANUEL OLEGE
   DEPARTMENT OF MATHEMATICS
   MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY
   P.O.BOX 190-50100 KAKAMEGA KENYA
   CELLPHONE: **+254721677449**
   Email: folege@mmust.**ac.ke**

3. DR. DENNIS OCHIENO
   DEPARTMENT OF BIOLOGICAL SCIENCE
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   CELLPHONE: **+254721683010**
   Email: dochieno@mmust.ac.ke