



Dr. Christopher Ouma Onyango
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Kenyatta University
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Personal Information

Date of Birth: 5th January 1976
Home County: Siaya
Constituency: Ugenya
Marital status: Married

Career Profile

I am an academician with over 10 years' experience in University teaching, research and administration. Currently, I am the Chairman Board of Post Graduate Studies in the Department of Mathematics and Actuarial Science at Kenyatta University.

Key Achievements

- Successfully supervised two PhD students.
- Successfully supervised 29 masters' students.
- Published 14 papers in a peer reviewed journals
- Successfully done teaching methodology course.
- Have attended workshops and conferences

Education and Professional Qualifications

Year	Qualification	Institution
2009-2011:	Doctor of Philosophy, PhD. (Applied Statistics, 2011). <i>Thesis title: 'Model based estimation of finite population totals in two stage cluster sampling.'</i>	Jomo Kenyatta University of Agriculture and Technology (J.K.U.A.T)
2003-2005:	Master of Science (Applied Statistics) <i>Thesis Title: 'Bootstrap confidence intervals for model based surveys.'</i>	Maseno University, Kisumu, Kenya.
1995-1999:	Bachelor of Science, BSc (Mathematics major) First Class Hons.	Kenyatta University, Nairobi, Kenya.
1990-1993:	K.C.S.E, 1993	Rang'ala Boys' Secondary, Siaya, Kenya

RESEARCH PUBLICATIONS

Articles in referenced Journals

Year 2020

1) David A. Alila, **C.O. Ouma** & E.O. Ombaka (2020) Efficiency of Domain mean estimators in the presence of non-response using two stage sampling with non-linear and linear cost functions. **Annals of Data Science. Springer.**

(2) Bii, K., **Ouma C.** & Odhiambo, (2020) J. Estimation of a Finite Population Mean under Random Nonresponse Using Kernel Weights. *Journal of Probability and Statistics*, vol. 2020,

Year 2019:

(3) Bii, K. **Ouma C.** & Odhiambo, J. (2019). Boundary Bias correction using weighted method in the presence of nonresponse in two stage cluster sampling. *Journal of Probability and Statistics*, vol. 2019, pp1-8.

Year 2018:

(4) Bii, K., & **Ouma, C.** (2018). Estimating a finite population mean under random non-response in two stage cluster sampling with replacement. *Journal of Physics. Conf. series 1132 (2018) 012071.*

Year 2017:

(5) Anekeya, D, **Ouma, C** & Nyongesa, K (2017). 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*. Vol. 7(2), pp 45-57.

(6) Anekeya, D, **Ouma, C** & Nyongesa, K (2017). Domain mean estimation using double sampling with nonlinear cost function in the presence of non-response. *Science Journal of Applied Mathematics and Statistics*. Vol. 6(1), pp 28-42.

(7) Bii, K., & **Ouma, C.** (2017). Model-Assisted Estimation of Population Mean in Two- Stage Cluster Sampling. *Pakistan Journal of Statistics* Vol.XIII, 1, PP 127-139.

(8) Nanok, J., & **Ouma, C** (2017). A socio-Economic and environmental analysis of effects of oil exploration on the local community in Lokichar, Turkana County, Kenya. *International Journal of Management, Economics and Social Sciences*. Vol. 6(3), pp 144-156.

Year 2016:

(9) Beatrice, K., Jemimah, W., & **Ouma, C (2016)**. A multivariate analysis of the effects of mobile phone money transfer on Micro and Small Enterprises, Thika Town (Kenya). American Journal of theoretical statistics. Vol.5(3), pp 108-114.

Year 2014:

(10) Oyoo D., & **Ouma, C. (2014)**. Estimation of Population Total in the Presence of Missing Values Using a Modified Murthy's Estimator and the Weight Adjustment Technique. American Journal of Applied Mathematics and Statistics, 2014, Vol. 2, No. 3, 163-167.

(11) Teresio M., John, K & **Ouma, C. (2014)** Mixture Regression-Cum-Ratio estimator using Multi-Auxiliary variables and attributes in single-phase sampling. Open Journal of statistics. Vol 4, pp 367-376.

Year 2010:

(12) **Ouma, C.**, Otieno, R. and Orwa, O., (2010). Generalized Model based Confidence Intervals in two Stage Cluster Sampling.. Pakistan Journal of Statistics and Operational Research. Volume 6, Number 2, pages 123-139.

(13) **Ouma, C.**, Otieno, O. and Orwa, O., (2010). Bootstrapping in Model based estimation of a finite population total in two stage Cluster Sampling with unequal Cluster sizes.. Far East Journal of Theoretical Statistics. Volume 33, Number 2, Pages 171-184.

Year 2005:

(14) **Ouma, C.** & Wafula C.,(2005) Bootstrap confidence intervals for model-based surveys. East Africa Journal of Statistics Vol 1 No 1,

Conference presentations.

Ouma, C. (2011) Inference for model Based Surveys in Two Stage Cluster Sampling. Proceedings of the First Kenyatta University International Mathematics Conference, Vol 1 pp 215- 223.

Training in Higher Education.

4th -7th March 2014 Faculty Development program-Strathmore Business School

Conferences, Seminars and Workshops attended.

- 8th June 2011-10th June 2011: 1st Kenyatta University International Mathematics Conference.
- 18th August -20th August 2011:1st Strathmore University Mathematics conference.
- 23rd -27th July 2012: Strathmore Statistical Modelling Workshop
- 17th June-21st June 2013: First Kenyatta University Workshop on Mathematical modelling
- 1st September to 5th September 2014: Strathmore University International school on Mathematical Epidemiology
- 3rd August to 7th August 2015 Strathmore International Mathematics Conference

QUALITY TEACHING, LEARNING AND MENTORSHIP

- 1st December 2010-3rd August 2011- Tutorial fellow- Department of Mathematics, Kenyatta University
- August 2011-to date: Lecturer Department of Mathematics, Kenyatta University.
- Attained student evaluation of above 70% in courses taught.

Post-graduate Supervision.

	Students' Name and Title of thesis	Degree	Year graduated
1	Nelson Bii. Title of Thesis: Estimating a finite population mean under random non-response in two-stage cluster sampling with replacement.	PhD. Statistics (Strathmore University)	2020
2	Lavender Adhiambo: Robust variance estimation of the population mean under simple random sampling	MSc. Statistics	2019
3	David A. Anekeya: Estimation of domains mean using double sampling with non-linear cost function in the presence of non-response	PhD. Statistics (Masinde Muliro University of Science and Technology)	2018
4	Onyango Ronald: Application of Auxiliary Variables in Two-Step Semi-Parametric Multiple Imputation Procedure in Estimation of Population Mean	MSc. Statistics	2018
5	Kemei Anderson: Estimation of a finite population total in the presence of Missing values in two phase sampling	MSc. Statistics	2015
6	Robinson Kibiwot: Cointegration Analysis and error correction model of imports and exports in Kenya	MSc. Statistics	2014
7	Onkoba, John. "The predictive Validity of KCSE first attempt grade on Kenyan University entry grade	MSc. Statistics	2014
8	Teresia Mutembei: Mixture –cum-Ratio Estimators using Multi-Auxiliary Variables and Attributes in single Phase Sampling	MSc. Statistics	2014
9	Kimani Beatrice: Multivariate Analysis of the effects of mobile phone money transfer on micro and small enterprises in Kenya	MSc. Social Statistics	2013
10	Oyoo David: Estimation of population total in the presence of missing values using a modified Murthy's estimator and the weight adjustment technique	MSc. Statistics	2013
11	Bii, K: Model-Assisted Estimation of Population mean in Two-Stage Cluster Sampling.	MSc. Statistics	2013
12	Mbuthia, A. "Analysis of Factors that influence use of Biomass in peri-urban Households in Kenya".	MSc. Social Statistics	2013

Supervision in other Schools.

To date I have also successfully supervised 17 MBA students.

Ongoing PhD supervision:

Oyoo, David Odhiambo. Title of thesis: Ratio estimation of population total in stratified random sampling under non-response.

Ongoing Msc. Statistics supervision:

Chepkui Rosemary: Estimation of population total in the presence of missing values using auxiliary information.

PROFESSIONAL /CONSULTING/THESIS EXAMINATION

S/n	Students' Name	Title	Degree level	Institution	Year Examined
1	Owiti Jackson Onyango	Modelling diagnosis of fever in children under 5 years of age seen in malaria Holoendemic area of Western Kenya	MSc. Biostatistics.	Kenyatta University	2013
2	Rachel Waema Mbogo	Stochastic Modelling of HIV Dynamics with an individual and its Management.	PhD. Biomathematics	Strathmore	2014
3	Ananda Kube Omutokoh	Quartile auto regression and its application to financial risk management and portfolio optimization	PhD. Statistics	Kenyatta University	2014
4	Tom Mirasi Benard	A multitool Analysis of the determinants of maternal mortality and impact to voucher for health in Kisumu sub-county, Kenya	MSc. Biostatistics.	Kenyatta University	2014
5	Kipruto Hillary Kipchumba	Stochastic processes models for the tuberculosis epidemic progression in Kenya.	MSc. Statistics	J.K.U.A. T	2015
6	Wilfred Musanda Olwande	Application of linear models in the study of factors associated with psychosis at Mathari hospital, Nairobi	MSc. Statistics	Kenyatta University	2015
7	Reuben Cheruiyot Langat	Robust estimation of finite population total incorporating data-reflection technique in nonparametric regression	PhD. Statistics	J. K.U.A T	2016
8	Bethseba Olga Atieno	Use of logistic regression analysis to determine significant factors that affect contraceptive use among teenagers in Yala and Luanda towns in Kenya.	MSc. Biostatistics	Kenyatta University	2016
9	Muchai, Eunice Wambui	Comparison of fuzzy and crisp classification trees.	PhD. Statistics	Kenyatta University	2017

10	Winnie Mokeira Onsongo	Bias reduction technique for estimating distribution functions for finite populations	PhD. Statistics	Pan African University	2018
11	Mable Jerop	Statistical modelling of determinants of antenatal care utilization among Samburu nomadic community in Kenya	MSc. Biostatistics	Kenyatta University	2018
12	Charlotte Mokaya	Robust Non-Parametric Estimation of the variance of the estimator of the Population Mean	MSc. Statistics	Kenyatta University	2019
13	Hannington Meshack Simiyu	A hybrid artificial Neural Networks Model for option pricing	PhD. in Mathematics	Pan African University	2019
14	MASTER S/P/162/2020	Maximum likelihood estimation of parameters for poisson-exponential distribution under progressive type 1 interval censoring	MSc. Statistics	Kenyatta University	2020

ADMINISTRATION AND RESPONSIBILITIES

- Chairman, Board of Post Graduate Studies Department of Mathematics and Actuarial Science, Kenyatta University
- Member of committee to spearhead the workshop on Mathematical Modelling, 2012
- Member of Committee to spearhead the 2nd International Mathematics Conference, 2015.
- Member of Departmental AD-HOC committee to review BSc. Statistics & Programming programme.

COMMUNITY ENGAGEMENT AND OTHER CONTRIBUTIONS.

- Jan 2012- 2014 BOG Member, Kogere Secondary School – Siaya County, Ugenya Constituency – We successfully started off new school and built 4 classrooms.
Others:
 - Am registered member Statistical Association of Kenya
 - I have been an External examiner at Strathmore Institute of Mathematical Sciences
- 2019 to date: Assistant moderator- St.Catherine Small Christian community- Njiru Parish.

Referees

Prof. Leo Odongo Mathematics and Actuarial Science Department Kenyatta University P.O BOX 43844-00100 Nairobi. leoodongo@yahoo.co.uk (Cell) 0722 387 299	Dr. Kennedy Awuor Mathematics and Actuarial Science Department Kenyatta University P.O BOX 43844-00100 Nairobi. Awuor.kennedy@ku.ac.ke (Cell) 0721 954 456	Prof. Vitalis Onyango-Otieno, Institute of Mathematical Sciences, Strathmore University PO. Box 59857-00200 Nairobi, Kenya Mobile: +254-733679124. Email: vponyango@strathmore.edu
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