Dr Ariyo, Oludare Samuel

Degree : B.Sc., M.Sc., (Abeokuta), PhD (Leuven)

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Department : Statistics

Acedemic Rank: Lecturer I

Current Possition:

Research Interest: Bayesian Methods, The analysis of longitudinal data / repeated measures, Mixed models / random-effects models / multilevel models, Missing data/dropout/survival Analysis, Models for multivariate repeated measures

Current Research:

(1)   Exploring posterior p-values for model assessment in longitudinal modelling.

(2)   Exploring prior distributions for constrained correlation matrices.

(3)   Spatio-temporal analysis and methodology

(4)   Bayesian autoregressive linear model

BIO-data:

Oludare Ariyo is a lecturer at the department of the Statistics Federal University of Agriculture, Abeokuta. He received his PhD (Biostatistics) at the KU Leuven Belgium on Bayesian model selection for longitudinal random-effects models. He has gained expertise in various statistical topics with research interests, including Bayesian methods, longitudinal analysis, statistical modelling, missing data/ survival analysis, and Mixed models / random-effects models / multilevel models. His research has led to several papers in highly qualified international journals (Journal of Applied Statistics, Communication in Statistics, Sankhya B, Nigeria Statistical Association Journal, Computational Statistics etc.).

Before his appointment in FUNAAB, Dr Ariyo has worked as a Data Analyst at the Crop-Utilization Units, IITA, Ibadan, and as a Senior statistician at National Horticultural Research Institutes (NIHORT), Ibadan. For over six years of working with these research institutes, Dr Ariyo had gain experience in applying Statistical methodology to real-life

problems, especially in Agriculture. During his four and half years of stay at the Interuniversity Institute for Biostatistics and statistical Bioinformatics (I-BioStat), Leuven, Belgium, Dr Ariyo further gained clinical trials experience and applied statistical methodology in Medical studies.

Dr Ariyo is an experienced R user with two R functions (https://github.com/OludareAriyo/Bayesselect and https://github.com/OludareAriyo/BayesselectGLMM) and currently working on an R package. Besides, he has an excellent working knowledge of the following software: SAS, JAGS, STAN, SPSS, Epi Info etc

He is a member of many professional bodies, has presented papers in international conferences across continents, and has received several grants. He currently the coordinator of FUNAAB-LISA (FUNAAB-Laboratory for Interdisciplinary Statistical Analysis) and an advisor to Overleaf (a collaborative cloud-based LaTeX editor used for writing, editing and publishing scientific documents.)

Dr Ariyo is happily married with Children.

Institution Attended:

(a)	Katholieke Universiteit, Leuven, Belgium.	2016-2020
(b)	University of Agriculture, Abeokuta, Nigeria.	2007-2010
(c)	University of Agriculture, Abeokuta, Nigeria.	2001-2005
(d)	Wesley College of Science Ibadan, Nigeria.	1997-1999

MEMBERSHIP OF PROFESSIONAL BODIES

(i)   Member, Statistical Modelling Society.

(ii)   Member, Psychometric Society

(iii)   Member, International Society for Clinical Biostatistics.

(iv)   Member, International Statistical Institutes.

(v)   Member, International Biometrics Society.

(vi)   Member, Nigeria Statistics Association.

Prizes, Honors, Scholarship, National and International Recognition

(a) 2017:Travel Award to attend World Statistical Congress Marrakech Morroco by the World Bank Washington DC, USA.

(b) 2017: Travel Award to attend Conference of the International Society for Clinical Biostatistics Vigo, Spain, by International Biometric Society Washington DC, USA.

(c) 2015: Tertiary Education Trust Fund AST&D Grant for PhD in Biostatistics at Katholieke Universiteit by Federal Government of Nigeria through Federal University of Agriculture, Abeokuta.

(d) 2012: Travel Award to attend International Biometric Conference held in Kobe Japan by International Biometric Society Washington DC, USA.

(e) 2012: Second-runner up, Young-Statistician Show-case, organised by International Biometrics Society held in   Kobe, Japan.

RESEARCH INTEREST OR COMMISSIONED

(i) Completed:

(a) Bayesian model selection for multilevel mediation models.

(b) Bayesian model selection for longitudinal count data.

(c) Simultaneous Bayesian modelling of skew-normal longitudinal measurements with non-ignorable dropout.

(d) A Robust non-linear mixed-effects model for COVID-19 deaths in African.

(ii) In progress :

(5) Longitudinal mediation analysis of cognitive ability on age-related diseases: LASA (Longitudinal Ageing Study of Amsterdam) project.

(6) Exploring posterior p-values for model assessment in longitudinal modelling.

(7) Exploring prior distributions for constrained correlation matrices.

(8) A Spatio-temporal study of prevalence HIV in Mexico: analyses of descriptive Spatio-temporal features, risks' tendencies and clustering by state.

Bayesian autoregressive linear model: Sensitivity to prior and sample

PUBLICATIONS

(i) Dissertation/Thesis

(a) Ariyo, O.S (2005): Modeling Climatic Variation to Cocoa yields. A case of Cocoa Research Institutes of Nigeria Ibadan. A B.Sc Project University of Agriculture, Abeokuta, Nigeria.

(b) Ariyo, O.S (2010): Cost Sensitivity of Classical Classification Functions. M.Sc Dissertation. University of Agriculture, Abeokuta, Nigeria.

(c) Ariyo, O.S (2020): Bayesian model selection for longitudinal random-effects models. PhD Thesis Katholieke Universities, Leuven, Belgium

(ii)   **Journal Articles in Print**

(1) ***Ariyo, O**., Quintero, A., Munoz, J., Verbeke, G., and Lesaffre, E. (2020): Bayesian model selection in the linear mixed model for longitudinal data. **Journal of Applied Statistics** 47(5); 890-913, Published by Taylor & Francis, CANADA available online at https://www.tandfonline.com/doi/full/10.1080/02664763.2019.1657814?journalCode=cjas20

(2) ***Ariyo, O**., Lesaffre, E., Verbeke, G and Quintero, A (2019): Model selection for Bayesian linear mixed models with longitudinal data: Sensitivity to the choice of priors. **Communications in Statistics-Simulation and Computation** Published by Taylor & Francis, UK, Accepted date: 30th September 2019 and available online on 11th October 2019 at https://www.tandfonline.com/doi/citedby/10.1080/03610918.2019.1676439?scroll=top&needAccess=true

(3) **Ariyo, O.** and Adebanji, A. (2011): Robust Linear Classifier under the unequal cost of misclassification. **_CBN Journal of Applied Statistics_** 2(1); 51-59. Published by Nigeria Statistical Association, NIGERIA.

(4) **Ariyo, O**., Akintunde, A., and AdeOluwa, O. (2015): Comparison of clustering methods for different data types using Rand index**. _Journal of Nigeria Statistical Association 27_**; 74-88, Published by Nigeria Statistical Association, NIGERIA.

(5) **Ariyo, O**., Adeleke, M., Yusuff, K. and Wale-Orojo, O. (2017): Comparison of non-linear mixed models fitted to longitudinal growths data of two breeds of chicken. **_FUNAI Journal of Science & Technology 1_**(1);101-108, Published by Federal University, Ndufu-Alike Ikwo (FUNAI), Nigeria, NIGERIA available online at www.fjst.org.

(6)   * Dawodu, G., Akintunde, A. and **Ariyo, O**. (2017): Stochastic Prediction of   Monthly Inflation Rates through Kalman Filtering. **_Journal of Natural Sciences, Engineering and Technology 16(_**2); 11-25. Published by Federal University of Agriculture, Abeokuta,

NIGERIA and available online at https://journal.unaab.edu.ng/index.php/JNSET/article/view/1842.

10 MAJOR CONFERENCES ATTENDED WITH PAPER READ

(a) **Ariyo, O**., Verbeke, G., and Lesaffre, E (2019): Bayesian model selection for generalised linear mixed model: Paper presentation at 40th Annual Conference of the International Society for Clinical Biostatistics held at Leuven Belgium 14-18, July 2019.

(b) **Ariyo, O** and Laseffre, E (2017). Bayesian Inference for skew-normal linear mixed models with covariates measurements errors. Paper presented at 38th Annual Conference of the International Society for Clinical Biostatistics held at Vigo Spain, 9-13, July 2017.

(c) **Ariyo, O**., Quintero, A ., Verbeke, G and Lesaffre, E (2017): Model selection for the skew-normal linear mixed models with covariate measurements errors: A Bayesian approach. Paper presented at 6th IBS Channel Network Conference held at the Hasselt Univesity, Diepenbeek, Belgium 24-26 April 2017.

(d) **Ariyo, O** and Laseffre, E (2017). Comparing skew-normal linear mixed models with nonignorable dropout via observed deviance information criterion. Paper presentation at 61st World Statistics Congress to hold at Marrakech, Morroco between July 16 and 21, 2017

(e) **Ariyo, O**., Yusuff, K and Wale-Orojo, O, (2015). Fitting the log-skew normal distribution to assess hypertensive patients' atherosclerosis level in Irewole Local Government Area of Osun State Nigeria. 14th Bi-Annual conference of the Sub-Saharan African network (SUSAN) of International biometrics society (IBS) held at the University of Ibadan, Nigeria.

(f) Wale-Orojo O., Olayiwola O., **Ariyo O**. and Yusuff K. (2015): Efficiency of Stratified Diagonal Ranked Set Sampling for the Estimation of Unknown Population Parameter. International Biometric Society Sub-Sahara African Regional Scientific Conference 11th – 13th November 2015.

(g) Yusuff K. ., Bello R., **Ariyo O**. ., and Wale-Orojo O. (2015): A Reflection of Similarities between electrical Conductivity and Total Dissolved Soloids Quantities in Borehole Water from Fitted Optimisation Models. International

Biometric Society Sub-Sahara African Regional Scientific Conference 11th –
13th November 2015.

TRAINING PROGRAMME ATTENDED (WITH DATES)

(i) International Society of Clinical Biostatistics workshop on Mediation analysis using R, Leuven, Belgium 14-15 July 2019.

(ii) I-Biostat KU workshop on Pairwise and Meta-Analysis, Leuven, Belgium 29-30 November 2018

(iii) I-Biostat KU workshop on Health Economic, Leuven, Belgium 27-28 September 2018.

(iv) I-Biostat Workshop on Bayesian parametric and nonparametric for missing data and Causal Inference, Leuven, Belgium 29-31 September 2018.

(v) International Statistical Institutes Workshop on Advance Metal Analysis with R, Marrakech, Morocco 15-16 July 2017.

(vi) International Society of Clinical Biostatistics workshop on Advance in Adaptive Clinical Trials Design Bayesian and Frequentist approaches, Vigo, Spain, 9-10 July 2007.

(vii) International Workshop on Statistical Modelling workshop, Groningen, Netherland 3-7, July 2017.