Benjamin Kweku Lugu

CONTACT INFORMATION

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EDUCATION

Sept. 2021 – Present

The University of Alabama
College of Education
Educational Studies in Psychology, Research Methodology, and Counseling
Advisor: Dr. Wenchao Ma

Sept. 2018 – Jul. 2021

University of Science and Technology of China (USTC)
Specialty: Statistics   *School*: School of Management
Master's in Business Administration
Advisor: Dr. Li Yongjun

Aug. 2016 – Jun. 2017

African Institute for Mathematical Sciences (AIMS), Rwanda
Specialty: Multivariate Statistics
MSc in Mathematical Sciences
Advisor: Dr. Joseph Nzabanita

Sept. 2011 – May 2015

University of Ghana, Legon
Specialty: Mathematics with Statistics
School: School of Physical & Mathematical Science
BSc. Mathematics

WORK EXPERIENCE

Aug. 2022 – Present

Quantitative Research Assistant
The University of Alabama, College of Education
Responsibilities:
Aid staff, graduate students, and faculty on coursework and research activities including:

- assessing research objectives and questions.
- addressing methods for gathering and analyzing data,
- suggesting useful resources and readings
- proofreading academic papers for appropriate grammar and style

Sept. 2017 – Jun. 2018

Kabkork Publication Ltd.
Title: Senior High School Mathematics Book Designer
Responsibilities:

- Co-author of Public Senior High School Further Mathematics Government textbook
- Solved textbook problems, type, edit and typesets mathematical contents
- Collaboration with the Chief Editors, Authors and the Chief Executive Officer

Sept. 2015 – Jul. 2016

Akuafo Hall ICT Lab, University of Ghana
Title: IT Administrator (National Service)
Responsibilities:

- Assist students and staff with IT related problems
- Supervisor of all the service personnel in my shift period

- Conduct research analysis

Nov. 2015 – May 2016

Kabkork Publication Ltd.
Title: Senior High School Mathematics Book Designer
Responsibilities:
- Type, edit and typesets mathematical contents for Core Mathematics Government textbook for public Schools in Ghana
- Collaboration with the Chief Editor and the Chief Executive Officer

May – Aug. 2014

Ashaiman Senior High School
Title: Student Intern
Responsibilities:
- Teaching Assistant for general and further mathematics
- Member of the internal examination evaluation board
- Classroom preparation for learning
- Participate in extracurricular activities

Spring, 2024

GUEST LECTURER

BER 658: Psychometric Theory and Practice [University of Alabama]
Course Instructor: Dr Kaiwen Man
Topic: Introduction to R
- Introduce basic concepts in R such as vectors, basic statistical analyses, matrix computation, and data manipulation.
- Provided hands-on guidance and support for students on how to apply these to data set.

Spring, 2023

BER 608: Survey Research [University of Alabama]
Course Instructor: Dr Stefanie Wind
Topic: Exploratory Factor Analysis (EFA) in R
- Prepared code for EFA in R
- Covered key concepts in factor analysis, data preparation and interpretation of results.
- Created hands-on tutorial videos on other related topics such as item response theory to complement instruction provided by Dr. Wind.

Spring 2020

Bootcamp on Structural Equation Modeling (SEM) [USTC]
- Led a comprehensive three-day workshop on Structural Equation Modeling for an international audience of graduate students.
- Provided instruction on SEM principles, statistical foundations, and practical applications using SPSS and IBM AMOS.
- Developed and delivered engaging lectures on model specification, estimation, and interpretation of SEM results.
- Prepared and demonstrated the use of SPSS for data preparation and analysis, and IBM AMOS for advanced SEM modeling.
- Facilitated hands-on sessions, allowing participants to apply SEM techniques using SPSS and IBM AMOS with real-world datasets.

COMPUTER SKILLS

Writing: MS Word, Latex
Presentation: PowerPoint, Beamer
Analysis: MS Excel, SPSS, AMOS, PLS-Smart, R

RESEARCH INTEREST

- Structural Equation Modeling
- Item Response Theory

- Cognitive Diagnostic Models

HONORS AND AWARDS	- The Chesed Foundation Scholarship - AIMS Rwanda Scholarship - The Belt and Road Scholarship of USTC - Graduate Council Fellowship, The University of Alabama - Center for Measurement Justice Travel Scholarship for Minoritized Professionals in Educational Measurement: Up to $3,000 in funding for travel expenses to attend NCME 2023 conference in Chicago, IL	Jan. 2009 – May 2015 Aug. 2016 – Jun. 2017 Sept. 2018 – Jul. 2021 Aug. 2021 – Present Dec. 2022

UPCOMING CONFERENCE PRESENTATIONS

Lugu, B., & Wind, S. A. (2024). Impact of Item Characteristics on Item Selection Procedures in Mokken Scale Analysis [Paper presentation]. National Council on Measurement Education (NCME) Conference 2024, Philadelphia, USA.

Wind, S. A., **Lugu, B**., & Wang, Y. (2024). Combining Nonparametric and Parametric IRT to Explore Differences in Measurement Quality between Subgroups [Paper presentation]. National Council on Measurement Education (NCME) Conference 2024, Philadelphia, USA.

Ma, W., Yin, Y., Cheng, Y. & **Lugu, B.** (2024). Assessing Intervention effectiveness and impact of covariates using longitudinal cognitive diagnosis models [Paper presentation]. National Council on Measurement Education (NCME) Conference 2024, Philadelphia, USA.

CONFERENCE PRESENTATIONS

Lugu, B., Ma, W., Guo, W., & Schumacker, R. (2023). Cognitive Diagnosis Model for Disengaged Behaviors [Paper presentation]. National Council on Measurement Education (NCME) Conference 2023, Chicago, USA.

Cao, C., **Lugu, B.**, & Li, J. (2023). The Sensitivity of Bayesian Fit Indices to Structural Misspecification in Structural Equation Modeling. Structural Equation Modeling: A Multidisciplinary Journal, 1-17.

Chen, Y., **Lugu, B.**, & Ma, W. (2023). Applying The Item Response Tree Model to CNI Test for Individual Moral Inclination Measurement [Paper presentation]. American Educational Research Association (AERA) Conference 2023, Chicago, USA.

Wind, S.A., **Lugu, B.** & Wang, Y. A sequential Moken scaling approach to evaluate response quality in survey research. Behav Res (2023). https://doi.org/10.3758/s13428-023-02147-9

SELECTED PUBLICATIONS

Wind, S.A., **Lugu, B.** (2024). Combining Nonparametric and Parametric Item Response Theory to Explore Data Quality: Illustrations and a Simulation Study. *Applied Measurement in Education.*

Decker, E. N., & **Lugu, B**. (2024). Black Religious Engagement and Post-College Educational Pathways: The Role of Demographic Variables.

Innovative Higher Education, 1-19. https://doi.org/10.1007/s10755-024-09698-5

Cao, C., **Lugu, B.**, & Li J. (2023). The Sensitivity of Bayesian Fit Indices to Structural Misspecification in Structural Equation Modeling, Structural Equation Modeling: A Multidisciplinary Journal, DOI: <u>10.1080/10705511.2023.2253497</u>

Wind, S.A., **Lugu, B**. & Wang, Y. A sequential Moken scaling approach to evaluate response quality in survey research. *Behav Res* (2023). <u>https://doi.org/10.3758/s13428-023-02147-9</u>

Basiru, I., Liu, G., Arkorful, V. E., **Lugu, B. K.**, Yousaf, B., Hussain, M., & Jama, O. M. (2022). Indigenous perceptions of factors influencing behavioral intentions towards climate change mitigation: An assessment. *International Journal of Public Administration*, *47*(1), 1–13. https://doi.org/10.1080/01900692.2022.2078838

Arkorful, V. E., **Lugu, B. K**., & Shuliang, Z. (2021). Unearthing mask waste separation behavior in COVID-19 pandemic period: An empirical evidence from Ghana using an integrated theory of planned behavior and norm activation model. *Current Psychology*, 1-16.

Arkorful, V. E., & **Lugu, B. K.** (2021). Voters' behavior: Probing the salience of Manifestoes, Debates, Ideology and Celebrity Endorsement. *Public Organization Review*, 1-20.

Arkorful, V. E., **Lugu, B. K.**, Hammond, A., & Basiru, I. (2021, January). Decentralization and Citizens' Participation in Local Governance: Does Trust and Transparency Matter?–An Empirical Study. In *Forum for development studies* (pp. 1-25). Routledge.

Lukman, S., Bao, P. X., **Kweku-Lugu, B.**, Arkorful, V. E., Latif, A., Gadabu, A., ... & Sadiq, M. A. (2021). Diasporan students social entrepreneurship intention: The moderating role of institutional support. *Journal of Public Affairs*, *21*(1), e2108.

Bondzie-Micah, V., Qigui, S., Arkorful, V. E., **Lugu, B.** K., Bentum-Micah, G., & Ayi-Bonte, A. N. A. (2021). Predicting consumer intention to use electronic health service: An empirical structural equation modeling approach. *Journal of Public Affairs*, e2677.

Arkorful, V. E., **Lugu, B. K.**, Tetteh, E., & Arkorful, V. A. (2021). Voters' voting intention: The salience of celebrity endorsement—Evidence from Ghana. Journal of Public Affairs, e2803. <u>https://doi.org/10.1002/pa.2803</u>

Arkorful, V.E., **Lugu, B.K.**, Hammond, A. et al. Examining Quality, Value, Satisfaction and Trust Dimensions: An Empirical Lens to Understand Health Insurance Systems Actual Usage. Public Organiz Rev 21, 471–489 (2021). https://doi.org/10.1007/s11115-020-00498-x