CONTACT INFORMATION	Social Science Research Institute 140 Science Drive, 256 Gross Hall Box 90989, Durham NC 27708	Phone: (919)-681-1863 Email: olanrewaju.akande@duke.edu Web: https://akandelanre.github.io

RESEARCH INTERESTS

Bayesian modeling, models for editing erroneous data, multiple imputation, missing data, mixture models, and hierarchical modeling.

POSITIONS

<u>Assistant Professor of the Practice</u>   2020 – present
Social Science Research Institute, Duke University
Department of Statistical Science, Duke University (Secondary)

<u>Instructor</u>   2019 – 2020
Social Science Research Institute, Duke University

<u>Research Assistant</u>   2014 – 2019
Department of Statistical Science, Duke University

EDUCATION

<u>Ph.D. in Statistical Science</u>, *Duke University*   2019
Dissertation: "Bayesian Models for Imputing Missing Data and Editing Erroneous Responses in Surveys"
Advisor: Jerome P. Reiter

<u>M.S. in Statistical and Economic Modeling</u>, *Duke University*   2015

<u>B.Sc. in Mathematics and Statistics</u>, *University of Lagos, Nigeria*   2010
First class honors

PEER-REVIEWED & INVITED PUBLICATIONS

1. **Akande, O.** and Reiter, J. P. (forthcoming), "Multiple Imputation for Nonignorable Item Nonresponse in Complex Surveys Using Auxiliary Margins," *Statistics in the Public Interest–In Memory of Stephen E. Fienberg*, edited by A. Carriquiry, W. Eddy, and J. Tanur, Springer. [arXiv Link]
2. **Akande, O.**, Madson, G., Hillygus, D. S., and Reiter, J. P. (2021), "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," *Journal of the Royal Statistical Society A*.
3. **Akande, O.**, Reiter, J. P., and Barrientos, A. F. (2019), "Multiple Imputation of Missing Values in Household Data with Structural Zeros," *Survey Methodology*, 45:2, 271-294.
4. **Akande, O.**, Barrientos, A. F., and Reiter, J. P. (2018), "Simultaneous Edit and Imputation For Household Data with Structural Zeros," *Journal*

of Survey Statistics and Methodology, 7:4, 498–519.

5. **Akande, O.**, Li, F., and Reiter, J. P. (2017), "An Empirical Comparison of Multiple Imputation Methods for Categorical Data," *The American Statistician*, 71:2, 162-170.

MANUSCRIPTS
UNDER REVIEW

6. Hu, J., **Akande, O.**, and Wang, Q., "Multiple Imputation and Synthetic Data Generation with the R package NPBayesImputeCat," submitted. [arXiv Link]

7. Wongkamthong, C.[†], and **Akande, O.**, "A Comparative Study of Imputation Methods for Multivariate Ordinal Data," submitted. [arXiv Link]

8. Wang, Z., **Akande, O.**, Poulos, J., Li F., "Are deep learning models superior for missing data imputation in complex surveys?: Evidence from an empirical comparison," submitted.

MANUSCRIPTS IN
PREPARATION

9. Wongkamthong, C.[†] and **Akande, O.**, "Imputing survey responses on political ideology using a hierarchical Dirichlet process mixture of multinomial distributions."

10. **Akande, O.**, Hu, J., Wang, Q., and Reiter, J. P., "Edit-Imputation and Synthetic Data Generation For Household Data with the R package NestedCategBayesImpute."

TEACHING

As Instructor

Social Science Research Institute, Duke University

- IDS 702: Modeling and Representation of Data
  - Fall 2021, Fall 2020, Fall 2019.

Department of Statistical Science, Duke University

- STA 602L: Bayesian and Modern Statistics
  - Summer I 2021, Spring 2021, Summer II 2020, Spring 2020.
- STA 610L: Hierarchical Models
  - Fall 2021, Spring 2021
- STA 360: Bayesian and Modern Statistics
  - Summer I 2021, Summer II 2020
- STA 111: Probability and Statistical Inference
  - Summer I 2018, Summer I 2016, Summer II 2014.

As Teaching Assistant

Department of Statistical Science, Duke University

- STA 440: Case Studies (senior undergrad)
  - Fall 2018

[†]Student co-author.

- STA 723: Statistics Case Studies (PhD level)
    - Spring 2018
- STA 732: Theoretical Statistics (PhD level)
    - Spring 2017
- STA 111: Probability and Statistical Inference
    - Spring 2014

PRESENTATIONS, WORKSHOPS & POSTERS

1. "Handling Missing Data and Faulty Responses in Household Data," Seminar talk at UNC Quantitative Psychology Forum. October 2020.
2. "Multiple Imputation for Nonignorable Item Nonresponse in Complex Surveys Using Auxiliary Margins," Contributed talk at Joint Statistical Meetings. August 2020.
3. "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," Contributed talk at Joint Statistical Meetings, Denver, CO. July 2019.
4. "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," Department of Statistical Science seminar series talk at Duke University, Durham, NC. March 2019.
5. "Handling Missing Data and Faulty Responses in Household Data," Invited faculty candidate seminar talk at University of Toronto, ON, Canada. January 2019.
6. "Handling Missing Data and Faulty Responses in Household Data," Invited faculty candidate seminar talk at Bucknell University, Lewisburg, PA. December 2018.
7. "Handling Missing Data and Faulty Responses in Household Data," Invited faculty candidate seminar talk at Duke University, Durham, NC. November 2018.
8. "Bayesian Simultaneous Edit and Imputation For Household Data with Structural Zeros," Contributed talk at Advances in Interdisciplinary Statistics and Combinatorics, Greensboro NC. October 2018.
9. "Bayesian Simultaneous Edit and Imputation For Household Data with Structural Zeros," Contributed talk at Joint Statistical Meetings, Vancouver, BC, Canada. July 2018.
10. "Leveraging Auxiliary Information on Marginal Distributions in Nonignorable Models for Item and Unit Nonresponse in Surveys," Contributed poster at Society for Political Methodology, Brigham Young University, Provo, UT. July 2018.
11. "Bayesian Simultaneous Edit and Imputation For Household Data with Structural Zeros," Seminar talk at Duke University, Department of Statistical Science. January 2018.
12. "Multiple Imputation of Missing Values in Household Data with Structural Zeros," Department of Statistical Science seminar series talk at Duke University, Durham, NC. February 2017.

MENTORING	<u>Masters Thesis Committee</u> Bo Liu (Statistical Science), 2021.	
	<u>Undergraduate Thesis Committee</u> Ethan Shen (Statistical Science), 2021.	
PROFESSIONAL EXPERIENCE	<u>Summer Research Fellow</u> *U.S. Food and Drug Administration*	Summer 2017
	<u>Analyst</u> *KPMG Professional Services, Nigeria*	2012 – 2013
	<u>Analyst</u> *Aterios Capital Limited, Lagos, Nigeria*	2011
SOFTWARE	NestedCategBayesImpute: R package for Modeling & Generating Synthetic Versions of Nested Categorical Data in the Presence of Impossible Combinations (Wang, Q., **Akande, O.**, Hu, J., Reiter, J.P. and Barrientos, A.)	
TEACHING TRAINING	Duke Certificate in College Teaching Program	2019
PROFESSIONAL SERVICE	<u>Journal Reviews:</u> Demographic Research, Journal of Official Statistics.	
UNIVERSITY SERVICE	<u>MSS Portfolio Presentation Committee Member</u> *Department of Statistical Science, Duke University*	2021
	<u>Admissions Committee Co-Chair</u> *MIDS Program, Social Science Research Institute, Duke University*	2020 - present
	<u>Student Mentor</u> for incoming Ph.D. students *Department of Statistical Science, Duke University*	2018
	<u>ASA DataFest@Duke Co-organizer and Instructor</u> *Department of Statistical Science, Duke University*	2017 – 2019
PROFESSIONAL AFFILIATIONS	American Statistical Association Society for Political Methodology	2017 – present 2018 – 2019
AWARDS	<u>Presidential Special Scholarship for Innovation & Dev.</u> *By: Federal Government of Nigeria* Full funding for masters degree	2013 – 2015