Abdul-Nasah Soale

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Education

Temple University, Philadelphia, PA

Ph.D. in Statistics   **Aug.2016—Dec.2020 (Expected)**

- Dissertation: On Sufficient Dimension Reduction via Asymmetric Least Squares
- Committee: Drs. Yuexiao Dong (Advisor), Cheng Yong Tang, Kuang-Yao Lee

East Tennessee State University (ETSU), Johnson City, TN

M.S. in Mathematical Sciences   **Jan.2015—Jul.2016**

- Thesis: Statistical Analysis of Spatio-Temporal Point Processes: Analysis of Earthquakes in Peru
- Advisor: Dr. Edith Seier

Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana

B.Sc. in Actuarial Science   **Aug.2008—May.2012**

- Final Year Project: Time Series Analysis of Ghana's Prime Interest Rate

Employment History

Native Enterprise Development (NED) Ghana
Co-founder   **Jun.2017 - present**

Philadelphia Parking Authority, Philadelphia, PA

Executive Intern   **Jun.—Aug.2018/19**

- Leadership Academy: Facilitator for Microsoft Office Suite and Smartsheet
- Statistical analysis of ticket violations and payment default rate

Choice Ghana, Salaga, Savannah Region, Ghana
Research Officer / Trainer   **Jun.2012—Dec.2014**

- Questionnaire design, data analysis, and Microsoft Excel training for staff
- Training of community facilitators (ActionAid-Ghana certified trainer)

Tamale Senior High School, Tamale, Northern Region, Ghana
Mathematics Teacher   **Oct.2012—Aug.2013**

Awards and Honors

- ICOSDA travel award for presenting students, 2019
- Summer Research Fellowship, Department of Statistical Science, 2019/20
- Vice-Chancellor's excellence award for the best student in the faculty of Physical Sciences, KNUST, 2012

Research Interest

I am interested in sufficient dimension reduction, multivariate analysis, machine learning, causal inference in networks.

Publications & Conference Presentations

Preprints in review

1. Janmohamed, K., Soale, A.N., Forastiere, L., Tang, W., Sha, Y., Massey, D., Demant, J., E.M. Airoldi, Kumar, N. *The Online Vaping Narrative and its Intersection with Covid-19: Initial Study Using Topic Modelling Techniques.* Journal of Medical Internet Research (To appear).

2. Soale, A.N. and Dong, Y. *On Expectile-Assisted Inverse Regression Estimation for Sufficient Dimension Reduction.* Submitted. arxiv.org pre-print no. 1910.10898 (https://arxiv.org/pdf/1910.10898.pdf)

3. Soale, A.N. and Dong, Y. *On Principal Asymmetric Least Squares for Sufficient Dimension Reduction.* Submitted. arxiv.org pre-print no. 2002.05264 (https://arxiv.org/pdf/2002.05264.pdf)

4. Kumar, N., Soale, A.N., Janmohamed, K., Sha, Y., Forastiere L., E.M. Airoldi. *Global Pandemic May Reduce Levels of Online Misinformation: The Case Of E-Cigarettes.* Submitted.

Papers in Progress

- Forastiere, L., Soale, A.N., and E.M. Airoldi. *Estimating Spillover Effect in Homophilous Social Networks.*

- Power, D. M., Soale, A. N., and Dong, Y. *A Review of Moment-Based Sufficient Dimension Reduction Methods for Multivariate Response.*

- Soale, A.N. and Tsyawo, E. *Clustered Covariate Regression.* Working paper (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3394012)

- Soale, A.N. and Dong, Y. *Efficient Discrimination and Clustering in Non-Gaussian Settings Using Envelope Parameterization.*

Conference presentations

- On principal asymmetric least squares for sufficient dimension reduction, JSM 2020 (contributed paper)

- On expectile-assisted inverse regression estimation for sufficient dimension reduction, 3RD International Conference On Statistical Distributions and Applications (ICOSDA) (poster)

- On principal asymmetric least squares for sufficient dimension reduction, Cook's Distance and Beyond (poster)

- Clustered Covariate Regression, Mid-West Econometrics Group Conference, Presented by Tsyawo, E.

Teaching Experience

Fox School of Business
   Instructor of Record (Undergraduate Courses)

1. Statistical Business Analytics, Fall 2020

2. Quantitative Methods for Business II, Spring 2019

3. Quantitative Methods for Business I, Fall 2018

   Teaching Assistant (Graduate Courses)

- Multivariate Analysis I, Statistical Methods for Business Research II, Applied Stat & Data Science

East Tennessee State University
   Teaching Assistant (Undergraduate Courses)

- Linear Algebra, Calculus I & II, Probability & Statistics

Other Credentials

- Certificate of Excellence, Ph.D. Teaching Academy, May.2018

- Online Teaching Certificate, Fox Online and Digital Learning, Aug.2020

Technical Skills

Programming Languages
R, Python, Matlab, Java, C, C++, C#, PHP, MySQL

Web Development
HTML5, CSS, JavaScript, ASP.NET, WordPress, Apache Web Servers

Miscellaneous
Microsoft SQL Server, Microsoft Office Suite, Excel VBA & Macros, Smartsheets

Services and Societies

- Member, American Statistical Association

- Member, Engineers Without Borders, Philadelphia Chapter

- Member, Global Change Lab

Referees

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