# ADDRESS

Department of Mathematics

College of Science

Faculty of Physical and Computational Sciences

Kwame Nkrumah University of Science and Technology Kumasi, Ghana

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Phone: 00233244389946.

Date of Birth: May 11, 1978. Nationality: Ghanaian.

Home Town: Akim Asuboa, Akim Oda.

Marital Status: Married.

# CAREER OBJECTIVES

I aspire to acquire more knowledge in the area of mathematics and statistics to become adequately trained as a research mathematician, data and climate scientist. The knowledge in these areas will enhance the efficient discharge of my academic and professional duties

# EDUCATION

PhD., Research Methodology (Applied Statistics), Department of Mathematics and Computer Science, Prince of Songkla University Pattani Campus, Thailand. 2014-2018

MSc Mathematics, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. 2005-2009

BSc Mathematics, Kwame Nkrumah University of Science and Technology,

Kumasi, Ghana. 2000-2004

# TEACHING EXPERIENCE

Visiting Lecturer, African Institute of Mathematical Sciences, Accra. 2019-2020

Teaching English at the Personnel Administration Division, knowledge management activities into international performance, Prince of Songkla University, Pattani Campus, Thailand. 2014-2015

Presbyterian University College Abetifi-Kwahu, Ghana, Lecturer in Mathematics/

Statistics. 2009-2020

Presbyterian University College, Abetifi-Kwahu, Ghana, Assistant Lecturer in

Mathematics / Statistics. 2008-2009

Faith Assemblies of God Senior High School, Kumasi Ghana, Mathematics Tutor. 2006-2008.

Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, Demonstrator/ Teaching Assistant. 2005-2007

Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana, National Service Personnel/Teaching Assistant. 2004-2005

Oil Palm Research Institute, Kusi-Kade, Ghana. 1999-2000

# RESEARCH EXPERIENCE

#  Research Assistant 2017-2018

Department of Mathematics and Computer Science Prince of Songkla University (PSU), Thailand.

Project: Investigation of patterns of solar irradiance in southern Thailand. Funded by: The Centre of Excellence, Department of Mathematics PSU, Thailand. Supervised by Assistant Professor Nittaya McNeil.

# PhD Researcher 2014-2017

Department of Mathematics and Computer Science Prince of Songkla University, Thailand.

Project: Investigation of trends, analysis and modelling of daily rainfall in Australia

Funded by: Thailand Education Hub and supervised by Emeritus Professor Donald McNeil.

#  Research Assistant 2012-2013 Department of Environmental, Joint Graduate School of Energy and Environment, King Mongkut’s University of Technology, Thonburi, Thailand. Project: Trend analysis of rainfall in urban areas of Bangkok.

# MSc. Research 2006-2009

Thesis: Analysis of daily rainfall data, a case of Nyankpala. Funded by Graduate School, KNUST, Kumasi, Ghana. Supervisor: Dr Seth Ohemeng Dapaah.

# PUBLICATIONS

Buya, S., Tongkumchum, P., & **Owusu, B. E**. (2020). Modelling of land-use change in

Thailand using binary logistic regression and multinomial logistic regression. Arabian Journal of Geosciences, 13, 437.

Boafo, D. K., Kraisornpornson, B., Panphon, S., **Owusu, B. E**., & Amaniampong, P. N.

(2020). Effect of organic soil amendments on soil quality in oil palm production. *Applied Soil Ecology*, *147*, 103358.

Wanishsakpong, W., & **Owusu, B. E.** (2019). Optimal time series model for forecasting

 monthly temperature in the southwestern region of Thailand. *Modeling Earth Systems*

 *and Environment*, 1-8.

**Owusu, B. E.**, McNeil, N., Eso, M. (2019) Statistical modelling for 5-day average rainfall

 in Australia, *Songklanakarin Journal of Science and Technology,* 41 (4), 870-878.

**Owusu, B. E**., & McNeil, N. (2019) Statistical modelling of 5-daily rainfall probability of

occurrence in Australia during 1950-2013*, Environmental Earth Sciences*, 78:66. doi.org/10.1007/s12665-019-8061-2.

McNeil, N., Chuai-Aree, S., Musikasuwan, S., & **Owusu, B. E**. (2019). Statistical Analysis of Solar Radiation in Southern Thailand. *Nature Environment and Pollution Technology*, *18*(2), 543-548.

Gururaja, P., McNeil, N., & **Owusu, B. E**. (2019). Statistical Modelling of 4hourly Wind Patterns in Calcutta, India. *Nature Environment and Pollution Technology*, *18*(1), 73-80.

**Owusu, B. E**., & McNeil Trend analysis of rainfall in cities, conference proceeding (paper). 11th International Conference on Agriculture, Biological, Environmental and Medical Sciences (ABEMS-18) April 2728, 2018 Bangkok (Thailand).

**Owusu, B. E**., & McNeil, N. (2018). Statistical Modelling of Daily Rainfall Variability Patterns in Australia. *Pertanika Journal of Science & Technology*, 26(2).

Gururaja, P., McNeil, N., & **Owusu, B. E.** (2019). Statistical Modelling of Wind Velocity in Calcutta, India, *Ecology, Environment and Conservation*, 19(3).

Owusu, B. A., Lim, A., Makaje, N., Sama, A., **Owusu, B. E**., & Arbu, N. (2018). Age-Specific Fertility Rate Projections in West Africa. *Journal of Population and Social Studies* [JPSS], 26(2), 119-127.

Boafo, D. K., Kraisornpornson, B., Panphon, S., & **Owusu, B. E**. (2018) Effect of Organic and Reduced Mineral Fertilisation on pH, Nutrient Content and Microbial Properties of Acid Soil*. Annual Research & Biology.*

# SUPERVISION EXPERIENCE

**MSc. Level**

Anfo, SO (2021) Modeling Rainfall Amount with Zero-inflated Poisson-Gama models,

 AIMS

 Ghana.

Ndolo, J (2021) Statistical Analysis of flood risk to support disaster management. (A case

 study of Greater Accra), AIMS Ghana.

Agbekonou, KA (2021) Modeling rainfall probability of occurrence: Application of

 Logistic regression.

Ekow-degraft, J (2020) Modelling rainfall for agricultural planning in Ghana, AIMS

 Ghana.

Odame, H (2020) Teacher-time-on task at some selected Senior High Schools in

Kwahu East District.

Oyom, F (2020) Causes and effect of absenteeism on the student performance among

 Basic Schools in Nkwatia.

Coffie, G (2020) The role of parent’s involvement in academic performance of their

 children.

Anim, C (2020) Truancy among students and its effect on their academic performance in

 Nkwatia Senior High School.

Dako-Mamphey, G (2020) Challenges in Academic Records Management in Tertiary

 Institutions in Ghana.

Kyerewaa-Peasa, M (2020) Impact of peer group influence on the academic performance

 of basic learners in the Kwahu East District.

Adeaba, G (2020) Causes of truancy and its effects on pupil’s academic performance in

 Essikadu and Sekondi Circuits.

 Ofosua, E (2020) Perception of students on home economics program in Senior High

 Schools in Kwahu South District.

Djabakour, DI (2020)Effects of truancy on academic performance of Junior High School

 Students At Nkwatia.

Nkansah, PR (2020) The impact of school feeding program on enrolment in Asem

Mixed M\A Primary ‘A’.

Henewaa, S (2020) The moral and ethical values impact on educational leader’s decision

 making, a study at Kwadaso Municipal.

Acheampong, A (2020) Effects of the school feeding programme on the instructional hours

at Tanoso Circuit Basic School.

Owusu-Frimpong, P (2020) The role of school discipline of students’ academic

 performance in Esreso D\A Junior High School in the Bosomtwe District of Ashanti

Region

Owusu-Bempah, A (2020) Impact of indiscipline on the academic performance of students

 in some selected Senior High Schools in Kumasi.

Kwarteng, KN (2020) Why do most female students fear and fail in mathematics?

**BSc Level**

Project Supervisor to Final Year Students of Mathematics: Presbyterian University College Ghana. 2008-2019.

# UNIVERSITY SERVICE

Dean of Students Affairs, Presbyterian University College Ghana, Abetifi-Kwahu.

Part of 2-member team that developed the Mphill Mathematics program for the Department of Mathematics, Presbyterian University College Ghana. 2020.

Head of Department, Department of Mathematics and Statistics**,** Presbyterian University College Ghana. 2019-2020

International students President, Prince of Songkla University Pattani Campus. 2015-2017

Organised mathematics quiz for Senior High Schools at the Kwahu Ridge. 2011

Welfare Chairman Presbyterian University College Ghana. 2010-2013

 Vice-Chairman of Credit Union, Presbyterian University College Ghana. 2010-2013

Director of Sports, Presbyterian University College Ghana. 2010-2013

Examinations Officer, Department of Mathematics Presbyterian University College Ghana. 2011-2013

Part of the 3-member committee to develop a new syllabus for the BSc. Actuarial Science and Statistics program, Presbyterian University College Ghana, 2010-2011

A member of the committee to review the BSc. Mathematics Syllabus, Presbyterian University College Ghana. 2008-2009

Organising Secretary, Science Students Association, KNUST, Kumasi, Ghana. 2003-2004

# CONFERENCES PRESENTATIONS (ORAL)

Symposium, World Statistics day and international year of Women in statistics and Data Science symposium, October 20, 2020, KNUST, Kumasi Ghana.

11th International Conference on Agriculture, Biological, Environmental and Medical Sciences (ABEMS-18) April 27-28, 2018 Bangkok (Thailand). Analysis of Trends and Patterns of Annual Rainfall in Australian Cities.

Seminar, Research Methodology in Practice, February 3-4, 2015. University of Malaya, Kuala Lumpur. Analysis of daily rainfall variability in Australia.

5th Science and Technology Graduate Symposium (SCI-TEC) May 29, 2015, Pattani, Thailand. Classification of daily rainfall variability in Australia by exploratory factor analysis.

17th International Conference on Environment and Climate Change, July 4-5, 2015, Singapore. Spatial-Temporal Rainfall Trends in Australia.

Seminar, Research Methodology in Practice, June 26-27, 2014. Prince of Songkla University Phuket Campus, Thailand. Trend analysis of Rainfall over Australia.

# WORKSHOPS

Workshop on Research Methods in ecology, Chaing Mang University, March 26, 2016, Thailand.

Workshop on Financial time series modelling, Chaing Mang University, January 26, 2016, Thailand.

# TEACHING EXPERIENCE

Visiting Lecturer, African Institute of Mathematics Accra, Ghana, Lecturer, Climate statistics 2019-2021

Teaching English at the Personnel Administration Division, Knowledge management activities into general performance, Prince of Songkla University Pattani Campus, 2014-2015.

Presbyterian University College Abetifi-Kwahu, Ghana, Lecturer in Mathematics / Statistics, 2009-2014.

Presbyterian University College, Abetifi-Kwahu, Ghana, Assistant Lecturer in Mathematics / Statistics, 2008-2009.

Faith Assemblies Of God Senior High School, Kumasi Ghana, 2006-2008

Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, Demonstrator/ Teaching Assistant, 2005-2007.

Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, National Service Personnel/Teaching Assistant, 2004-2005.

# PROFESSIONAL CONTRIBUTION AND AFFILIATIONS

**Journal Reviewer**

Scientific Africa Journal, 2018-2020.

Separation Technology Journal, 2020.

Nature, Environment and Pollution Technology Journal, 2020

Member of American Geophysical Union, 2018-2020.

Member of Climate and Data Science Team of Prof. Dr. Don McNeil 2014-2020 in Southeast Asia.

# REFEREES

Prof. Adu Kumi, Dean of Students, Presbyterian University College Ghana, Okwahu Campus, Abetifi Kwahu, Ghana. Email: adu-kumi.j@presbyuniversity.edu.gh

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Dr. Patrick Aboagye-Sarfo, PhD. | System Modeller, Department of Health Level 1, B

Block, 189 Royal Street, East Perth, WA, 6004. Phone: (08) 9222 6887 |

F: (08) 9222 2032 Email: Patrick.Aboagye-Sarfo@health.wa.gov.au

Dr. Simon Kojo Appiah, Senior Lecturer/ Exams Officer, Department of Statistics and Actuarial Science, Faculty of Science and Technology, KNUST Kumasi Ghana.

Email:skappiah@yahoo.co.uk. Phone: (+233) 240163286