

OLANREWAJU SONEYE-AROGUNDADE

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EDUCATION

PhD, **OBAFEMI AWOLOWO UNIVERSITY, Nigeria**

November 2018

CGPA: 5.00/5.00

(Area of specialization in Atmospheric Physics)

Thesis Title: Investigation of the Effect of Atmospheric Aerosol Loading on the Surface Radiation Balance at Ile-Ife, Southwest Nigeria.

M.Sc., **OBAFEMI AWOLOWO UNIVERSITY, Nigeria**

July 2014

CGPA: 3.88/5.00

(Area of specialization in Atmospheric Physics)

Thesis Title: An Investigation of the Solar Reflection Coefficient over Natural and Artificial surfaces in Ile-Ife, Southwestern Nigeria.

B.Sc., **TAI SOLARIN UNIVERSITY OF EDUCATION, Nigeria**

December 2009

Thesis Title: Variation in Hydrochlorofluorocarbon Transmittance with Time in a Model Atmosphere, Sagamu in Ogun State

CGPA: 4.05/5.00

OBJECTIVE

To obtain a position that will enable me to use my educational background and skill while working with motivated and dedicated people to contribute to the organization's growth while achieving and attaining personal and professional development and proficiency.

RESEARCH INTERESTS

My research focuses on understanding atmospheric chemistry and Earth's radiation balance, specifically

- Investigating urban air pollution using fine-scale dispersion models
- Investigating atmospheric aerosols and water vapor pressure
- Studying surface energy balance, visibility, clearness, and cloudiness indices
- Examining diffuse solar radiation models using the relative sunshine and clearness index
- Comparing various incoming solar and downward longwave radiation models statistically
- Developing solar and longwave radiation models
- Studying atmospheric turbidity using Linke's turbidity factor
- Radiation and Health

EXPERIENCE

Teaching Assistant

January 2023 - Present

- Department Of Earth and Atmospheric Sciences, University of Houston, Houston, TX
 - Quantified details/skills
 - Preparing and delivering of lab course lectures to students on course titles such as Introduction to Climate Change, Air Pollution Meteorology
 - Presenting of suitable learning experiences for all the students
 - Evaluating and grading of students' labs and assignments
 - Compiling, examining, and grading of continuous assessment tests

- Overseeing and analysis of students' attendance records, grades, labs, and assignments

Physics Facilitator

March 2019 - December 2022

- National Teachers' Institute, Kaduna, Nigeria
 - Quantified details/skills
 - Preparing and delivering of lectures to undergraduate students (100 and 200 levels) on course titles such as Elementary Mechanics, Heat and Properties of Matter, General Practical Physics I
 - Instructing of practical physics classes
 - Presenting of suitable learning experiences for all the students
 - Assessing and grading of students' practical work and assignments
 - Compiling, examining, and grading of continuous assessment tests
 - Overseeing and analysis of students' attendance records, grades, practical work, and assignments

Lecturer

October 2019 - November 2020

- **Lecturer II**, Department of Physics, Anchor University Lagos, Nigeria
 - Quantified details/skills
 - Preparing and delivering of lectures to undergraduate students
 - Instructing of practical physics classes
 - Presenting of suitable learning experiences for all the students
 - Evaluating and grading of students' examinations, practical work assignments, and examinations
 - Compiling, examining, and grading of continuous assessment tests and semester examinations
 - Overseeing and analysis of students' attendance records, grades, practical work, and assignments

Teaching Assistant

March 2012 - November 2018

- Department of Physics and Engineering Physics, Obafemi Awolowo University, Ile-Ife, Nigeria
 - Quantified details/skills
 - Teaching of physics' tutorial, Physics and Atmospheric Physics labs, keeping of records, and other miscellaneous projects
 - Tutoring and mentoring of students
 - Supervising of year-four students' research projects
 - Compiling, examining, and grading of assignments and recording grades
 - Supervising of examinations

PUBLICATIONS

- **O. Soneye-Arogundade** and B. Rappenglück. In preparation “UVER in Houston, USA: Assessing Direct and Indirect Implications for Public Health.”
- **O. Soneye-Arogundade** and B. Rappenglück. In preparation “Analysis of Tropospheric Radio Refractivity and Radio Field Strength Variability in Houston, USA: In Situ Measurements and Empirical Modeling.”
- **O. Soneye-Arogundade** and B. Rappenglück. In preparation “Assessment of incoming solar radiation models under clear-sky conditions at a Tropical location – Ile-Ife, Southwest Nigeria.”
- **O. Soneye-Arogundade** and M. Ayoola. In preparation. “Dataset of Surface Net Radiation Components at Ile-Ife, Southwest Nigeria.”
- **O. Soneye-Arogundade**, O. Obisesan and M. Ayoola. In preparation. “Dataset of Aerosol Optical Depth at Ile-Ife, Southwest Nigeria.”
- **O. Soneye-Arogundade** and B. Rappenglück (2024). “The Variation in Atmospheric Turbidity over a Tropical Site in Nigeria and Its Relation to Climate Drivers.” *Atmosphere*. 15: 367. <https://doi.org/10.3390/atmos15030367>
- **O. Soneye-Arogundade** and B. Rappenglück (2023). “Estimation of Diffuse Solar Radiation Models for a Tropical Site in Nigeria.” *Pure and Applied Geophysics*. 18: 3385–340 <https://doi.org/10.1007/s00024-023-03330-x>
- **O. Soneye-Arogundade**. (2021). “Evaluation and calibration of downward longwave radiation models under cloudless sky at Ile-Ife, Nigeria.” *Atmósfera* 34(4): 417 - 432. <https://doi.org/10.20937/ATM.52843>

- **O. Soneye.** (2021). “Evaluation of clearness index and cloudiness index using measured global solar radiation data: A case study for a tropical climatic region of Nigeria.” *Atmósfera* 34(1): 25 - 39. <https://doi.org/10.20937/ATM.52796>
- A. Toyeye, L. Sunmonu, O. Babatunde, O. Abiye, **O. Soneye-Arogundade**, et al (2020). “Evaluation of the performance of some evapotranspiration models at a Tropical Location in Ile – Ife, Nigeria.” *Asian Journal of Applied Sciences, Science Alert* 8(6): 325 - 334. <https://doi.org/10.24203/ajas.v8i6.5854>
- **O. Soneye**, M. Ayoola, I. Ajao and O. Jegede (2019). “Diurnal and seasonal variations of the incoming solar radiation flux at a tropical station, Ile-Ife, Nigeria.” *Heliyon, Elsevier* 5 (5): e01673. <https://doi.org/10.1016/j.heliyon.2019.e01673>
- **O. Soneye**, M. Ayoola, E. Ogolo, I. Ajao and O. Jegede (2015). “An Investigation of the solar reflection coefficient over grass and material surfaces in Ile-Ife, Nigeria.” *Journal of Meteorology and Climate Science* 13(1): 10 - 20.

CONFERENCE PRESENTATIONS AND PAPERS

- **O. Soneye-Arogundade** and B. Rappenglück (February 2024). “Estimation of Diffuse Solar Radiation Models for a Tropical Site in Nigeria.” Poster presented at the 30th Annual Milton B. Dobrin Lecture, Department of Earth and Atmospheric Sciences, University of Houston, TX.
- **O. Soneye-Arogundade** and B. Rappenglück (November 2023). “Estimation of Diffuse Solar Radiation Models for a Tropical Site in Nigeria.” Poster presented at the 25th Annual Robert E. Sheriff Lecture, Department of Earth and Atmospheric Sciences, University of Houston, TX.
- V. U. J. Nwankwo, S. K. Chakrabarti, S. Samsal, W. Denig, **O.O. Soneye** et al. (March 2020). “Radio Aeronomy in Nigeria: First Results from very Low Frequency (VLF) Radio Waves Receiving Station at Anchor University, Lagos.” International Conference in Mathematics, Computer Engineering and Computer Science (ICMCECS), Lagos, Nigeria. <https://doi.org/10.1109/ICMCECS47690.2020.247002>
- Harnessing Scientific Innovations for a Safer Planet (October 2018). Obafemi Awolowo University, Ile- Ife, Nigeria.
- Dynamics-Aerosol Chemistry-Cloud Interactions in West Africa (DACCIWA) Conference (October 2017). Karlsruhe Institute of Technology, Germany.

HONORS AND AWARDS

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| • Graduate Tuition Fellowship (GTF), University of Houston | Spring 2023 till date |
| • Student Fees Advisory Committee Child Care Tuition Assistance, University of Houston Children’s Learning Centers | Fall 2023, Spring 2024 |

RELEVANT COURSES

Atmospheric Numerical Modelling, Atmospheric Chemistry, Atmosphere and Ocean Dynamics, Advanced Meteorology, Solar and Atmospheric Radiation, Advanced Dynamic Meteorology, Satellite Meteorology, Boundary Layer Meteorology, Air Pollution Meteorology,

TEACHING EXPERIENCE

Courses Taught

- Introduction to Climate Change
- Air Pollution Meteorology
- Semiconductor devices and Materials, undergraduate level.
- Electricity and magnetism, undergraduate level (co-taught).
- Electric circuit and electronics, undergraduate level.
- Elementary Modern Physics, undergraduate level.
- General Physics II, undergraduate level.
- Heat and Properties of Matter, undergraduate level.
- Geometrics and Wave Optics, undergraduate level.

- Modern Physics, undergraduate level.
- Electromagnetism, undergraduate level.
- Thermodynamics, undergraduate level.

Advising

- Advisor to 6 sophomore students

Service

- Department Review Panel Member, 2019-2020.
- Sundry Application Member, 2019/2020.

MANUSCRIPT REVIEWS

- Air Quality, Atmosphere and Health
- Atmósfera
- Scientific Reports

SKILLS

- **Meteorological Sensors:** Net radiometers (Models NR01, NR-LITE and Q7), eddy covariance system comprising of an ultrasonic anemometer (Model CSAT3) and an open-path Li-COR infra-red gas analyser (Model LI-7500), precision infrared thermometers (Model SI-111), air temperature and relative humidity digital probe, (Model HMP45), pyranometer (Model CS300), handheld sun photometer (Model CALITOO), data loggers (Models CR10X and CR1000)
- **Software:** Python, OpenAir, NOAA HYSPLIT, AERMOD Dispersion Model, CALINE Dispersion Model, Microsoft-Office Application, Origin Statistical Package
- **Bash:** Proficient in writing and executing bash scripts on Linux/Unix systems. Experienced with using Bash built-in commands, shell variables, control structures, operators, etc.
- **Certifications:** Introduction to Cluster Computing, Hewlett Packard Enterprise Data Science Institute, University of Houston, Houston, TX; Scientific Programming with Python, Hewlett Packard Enterprise Data Science Institute, University of Houston, Houston, TX
- **Languages:** Bilingual in English and Yoruba

EXTRA-CURRICULAR ACTIVITIES

- Listening to music, sewing; cooking - https://instagram.com/lanroo_kitchen?igshid=MzRIODBiNWFIZA==