# SONEYE-AROGUNDADE Olanrewaju Olukemi

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## Education

- PhD (Physics), with a specialisation in Atmospheric Physics          November 2018
  Obafemi Awolowo University, Ile-Ife, Nigeria, CGPA: 5.00/5.00
- M.Sc. (Physics), with a specialisation in Atmospheric Physics          July 2014
  Obafemi Awolowo University, Ile-Ife, Nigeria, CGPA: 3.88/5.00
- B.Sc. (Ed.) Physics          December 2009
  Tai Solarin University of Education, Nigeria, CGPA: 4.05/5.00

## Profile

- Highly self-motivated researcher with demonstrated research expertise in Atmospheric Physics.
- Target-oriented; strong scientific, analytical, and logical skills
- Rich experience in the setting up of sensors such as Net Radiometers, eddy covariance systems comprising of an ultrasonic anemometer and an open-path Li-COR infra-red gas analyser, precision infrared thermometers, air temperature and relative humidity digital probes, pyranometer, handheld sun photometer for measurements of meteorological parameters.
- Highly creative, innovative, and eager to learn new things and adapt to new environments quickly.

## Objective

To strive for excellence and precision at all times, in all positions and circumstances; and to successfully carry out assignments by working effectively in teams 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 vapour 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

# Professional Experience

- 2019-Present: Physics Facilitator, National Teachers' Institute, Kaduna, Nigeria.
- 2019-2020: Lecturer II, Department of Physics, Anchor University Lagos, Nigeria.
- 2014-2018: Teaching Assistant, Department of Physics and Engineering Physics, Obafemi Awolowo University, Ile-Ife, Nigeria.
- 2012-2014: Teaching Assistant, Department of Physics and Engineering Physics, Obafemi Awolowo University, Ile-Ife, Nigeria.

# Publications

## In Preparation Publications
These are publications that should be submitted within 2023.
- **Soneye-Arogundade, O. O,** Rappenglück, B: Study of the atmospheric turbidity over Tropical Nigeria.
- **Soneye-Arogundade, O. O**., Ayoola, M. A: Dataset of Surface Net Radiation Components at Ile-Ife, Southwest Nigeria.
- **Soneye-Arogundade, O. O**., Obisesan, O. E., Ayoola, M. A: Dataset of Aerosol Optical Depth at Ile-Ife, Southwestern Nigeria.
- **Soneye-Arogundade, O. O**: Assessment of incoming solar radiation models under clear-sky conditions at a Tropical location – Ile-Ife, Southwest Nigeria.

## Accepted Publication:
- **Soneye-Arogundade, O. O,** Rappenglück, B: Estimation of Diffuse Solar Radiation Models for a Tropical Site in Nigeria (*Pure and Applied Geophysics*).

## Refereed Publications
- **Soneye-Arogundade, O.O.** (2021): Evaluation and calibration of downward longwave radiation models under cloudless sky at Ile-Ife, Nigeria, Atmósfera **34** (4), 417-432.
- **Soneye, O.O.** (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.
- Toyeje, A.B., Sunmonu, L.A., Babatunde, O.A., Abiye, O.A., **Soneye-Arogundade, O.O.,** Olufemi, O.A., Ayoola, M.A., Obisesan, O.E., Omokungbe, O.R (2020): Performance evaluation of some evapotranspiration models at a tropical location in Ile-Ife, Nigeria, Asian Journal of Applied Sciences, Science Alert **8** (6), 325-334.

- **Soneye, O.O.,** Ayoola, M.A., Ajao, I.A., Jegede, O.O (2019): Diurnal and seasonal variations of the incoming solar radiation flux at a tropical station, Ile-Ife, Nigeria. Heliyon, Elsevier **5** (5): e01673.
- **Soneye, O. O.,** Ayoola, M. A., Ogolo, E. O., Ajao, I. O., Jegede, O. O. (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 Papers
- Nwankwo, V. U. J., Chakrabarti, S. K., Samsal, S., Denig, W., Ajakaiye, M., Akinsola, T., Adeyanju, M. P., Anekwe, P., Iluore, K., Olatunji, M., Bhowmick, D., Ftokun, J., Ayoola, M. A., **Soneye O.O.**, Ajamu, J (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), *doi.org/10.1109/ICMCECS47690.2020.247002*.

## Theses Written
- PhD. Research Thesis: Investigation of the Effect of Atmospheric Aerosol Loading on the Surface Radiation Balance at Ile-Ife, Southwest Nigeria.
- M.Sc. Research Thesis: An Investigation of the Solar Reflection Coefficient over Natural and Artificial surfaces in Ile-Ife, Southwestern Nigeria.
- B.Sc. Ed. (Hons) Dissertation: Variation in Hydrochlorofluorocarbon Transmittance with Time in a Model Atmosphere, Sagamu in Ogun State.

# Conference

- International Conference in Mathematics, Computer Engineering and Computer Science (ICMCECS) held at Anchor University, Lagos, Nigeria, March 2020.
- Harnessing Scientific Innovations for a Safer Planet, held at Obafemi Awolowo University, Ile- Ife, Nigeria, October 2018.
- Dynamics-Aerosol Chemistry-Cloud Interactions in West Africa (DACCIWA) Conference, held at Karlsruhe Institute of Technology, Germany, October 2017.

# Honours & Awards

Graduate Tuition Fellowship (GTF), University of Houston

# Relevant Courses

Atmospheric Numerical Modelling, 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
- 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 Level**

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

# Computer Skills

- Python
- AERMOD (EPA's dispersion model), NOAA HYSPLIT

# Manuscript Reviews

- Air Quality, Atmosphere and Health

# Extra-Curricular Activities

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