

Chibuisi Okorieimoh
School of Physics, Clinical and Optometric Sciences
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Research Interests

Dr Chibuisi Okorieimoh's research interests lie at the intersection of renewable energy technologies, photovoltaic (PV) performance analysis, and sustainable energy policy. His work aims to enhance the understanding of solar PV system behaviour, improve durability and efficiency, and inform policy frameworks that support equitable energy transitions. Key areas of interest include:

Photovoltaic (PV) System Performance and Reliability – Long-term performance assessment, degradation and loss rate analysis, transient behaviour, and seasonal variability in grid-connected and rooftop PV systems.

Renewable Energy Materials – Synthesis and characterisation of thin-film and nanostructured semiconductors, including doped ZnO materials for optoelectronic and photovoltaic applications.

Energy Policy and Regulation – Comparative analysis of decentralised renewable energy policies, governance frameworks, and regulatory challenges in sub-Saharan Africa and other emerging markets.

Sustainable Electrification and Just Energy Transitions – Strategies for inclusive access to clean energy through decentralised and community-based renewable systems.

Performance Modelling and System Optimisation – Bridging experimental data with predictive models to improve PV deployment efficiency across diverse climatic and socioeconomic contexts.

Qualifications

PhD, Long-Term Durability of Rooftop Grid-Connected Solar Photovoltaic Systems, Technological University Dublin
1 Sept 2018 → 20 Jun 2022
Award Date: 15 Feb 2023

Master, Room-temperature synthesis and optical properties of nanostructured Ba-Doped ZnO thin films, University of Nigeria
1 Mar 2017 → 1 Mar 2018
Award Date: 1 Dec 2018

Master, N/A, Universidad de Valladolid
16 Aug 2016 → 27 Feb 2017
Award Date: 27 Feb 2017

Bachelor, Gender imbalance in the enrolment of students in physics: Case study of tertiary institutions in Imo State, Nigeria, University of Nigeria
10 Aug 2007 → 11 Aug 2011
Award Date: 25 Jan 2013

Higher Diploma, Effect of corrosion rate in some metallic materials: Copper, Aluminium and Zinc
1 Jul 2004 → 15 Aug 2006
Award Date: 19 Aug 2008

Employment

Technician

School of Physics, Clinical and Optometric Sciences
Technological University Dublin
12 Dec 2024 → present

Policy Researcher

Atlantic Technological University Sligo
Ireland
15 May 2024 → 31 Dec 2024

Lecturer

Dublin City University
Dublin, Ireland
15 Sept 2022 → 14 May 2024

Tutor

Alvan Ikoku Federal College of Education Owerri, Nigeria
Nigeria
2 Mar 2017 → 18 Aug 2018

Research Assistant

University of Nigeria, Nsukka
1 Mar 2015 → 1 Mar 2017

Tutor

Logos International High School, Awo-Omamma, Nigeria
Nigeria
23 Feb 2014 → 23 Feb 2015

Lecturer

Alvan Ikoku Federal College of Education, Owerri, Nigeria
Nigeria
22 Feb 2013 → 22 Feb 2014

Tutor

New Laetare High School, Owerri, Nigeria
Nigeria
12 Aug 2011 → 20 Feb 2013

Research outputs**Policy and regulatory challenges in decentralised renewable energy deployment: Case studies from Nigeria, Liberia, and Malawi**

Okorieimoh, C. & Ehimen, E., Feb 2026, In: Utilities Policy. 98, p. 1-12 12 p., 102075.

Comparison of Predicted and Measured Annual Performance of a Roof-Top Grid-Connected PV System in the Irish Climate

Okorieimoh, C., Norton, B. & Conlon, M., 2 Apr 2025, *Sustainable Ecological Engineering Design. SEEDS 2021. Springer, Cham.* Springer Nature, p. 91-102 11 p.

Reviewing the External Factors That Influence PV Output Performance in the Irish Climate

Okorieimoh, C., Norton, B. & Conlon, M., 2 Apr 2025, *Sustainable Ecological Engineering Design. SEEDS 2021. Springer, Cham.* Springer Nature, p. 103-113 10 p.

Impediments and Resolutions to Embracing Decentralised Renewable Energy Systems in Sub-Saharan Africa: A Comparative Overview of Regulatory Frameworks and Electrification Initiatives in Nigeria, Liberia, and Malawi
Okorieimoh, C. & Ehimen, E., 3 Dec 2024, In: SSRN Electronic Journal. p. 1-18 18 p.

Disaggregating Longer-Term Trends from Seasonal Variations in Measured PV System Performance
Okorieimoh, C., Norton, B. & Conlon, M., 2024, In: *Electricity*. 5, 1, p. 1-23 23 p.

Influence of Site and System Parameters on the Performance of Roof-Top Grid-Connected PV Systems Installed in Harlequins, Belfast, Northern Ireland
Okorieimoh, C., Norton, B., Conlon, M., Lalor, D. & McNamara, C., 2022, In: *International Research Journal of Engineering and Technology (IRJET)*. 09, 02, p. 507-520

Long-Term Durability of Rooftop Grid-Connected Solar Photovoltaic Systems
Okorieimoh, C., 2022, 249 p. Technological University Dublin.

THE EFFECTS OF THE TRANSIENTS OF THE TRANSIENT AND PERFORMANCE LOSS RATES ON PV OUTPUT PERFORMANCE
Okorieimoh, C., Norton, B. & Conlon, M., 2021, *International Conference on Innovations in Energy Engineering & Cleaner Production IEECP21*. International Conference on Innovations in Energy Engineering & Cleaner Production IEECP21, p. 2-12 10 p.

Long-Term Durability of Solar Photovoltaic Modules
Okorieimoh, C., Norton, B. & Conlon, M., 30 Jun 2020, *Sustainable Ecological Engineering Design*. Springer, Cham.. Springer Nature, p. 317-325 8 p.

Effect of Transient Performance Changes on Photovoltaic Modules Output
Okorieimoh, C., Norton, B. & Conlon, M., 2019.