Dr. Dennis Edem Dzebre

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RESEARCH

Interests: Wind Energy · WRF · Engineering Design · Modelling

Areas: Atmospheric Science · Global and Planetary Change · Mechanical Engineering · Electrical and Electronic Engineering · Renewable Energy, Sustainability and the Environment · Pollution

RESEARCH SUMMARY

21	137	7	4	2.48	7%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 21 publications listed below, 2012–2026. Field-weighted impact is the mean over the 15 works scored for it; 1.00 is the world average for works of the same field, type and year. 1 of the 15 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Senior Lecturer 2023–present
Mechanical Engineering, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

PhD - Renewable Energy Specialization 2016–2019
Environmental Sciences and Natural Resources Management, Norwegian University of Life Sciences, Ås, Norway

PUBLICATIONS

Journal articles 19

1. **DE Dzebre**, DA Quansah (2026). Case Studies of Successful Curriculum Integration at KNUST. *Empowering Ghana's Engineering Future: A Model for Professional Education in Renewable Energy—and beyond*. https://books.google.com/books?hl=en&lr=&id=QeO4EQAAQBAJ&oi=fnd&pg=PA70&dq=info:7Tc_UhQ74h0J:scholar.google.com&ots=rtC9ufbKN_&sig=WuWeo7sskRTcuFjsXyBBLNn1F3U
2. Marshet M. Admas, Lena D. Mensah, **Denis E.K. Dzebre**, Richard Arthur, David A. Quansah (2025). Estimating the carbon footprint of Ethiopian higher education institutions: A case study of Debre Markos University. *Results in Engineering*. https://doi.org/10.1016/j.rineng.2025.104911
3. Flavio Odoi-Yorke, John Bain, Ephraim Bonah Agyekum, **Denis E. K. Dzebre**, Charles K. K. Sekyere, David Ato Quansah, Muyiwa S. Adaramola (2025). Mapping Ghana's renewable energy research landscape: a bibliometric insight into trends, progress, and policy relevance for sustainable development. *International Journal of Ambient Energy*. https://doi.org/10.1080/01430750.2025.2577223
4. Saeed Abdul-Ganiiyu, Rosa Emefa Djangba, **Denis Edem Kwame Dzebre**, David Ato Quansah, Muyiwa Samuel Adaramola (2024). A Comparison of Levelised Cost of Energy of Different Energy Sources for Irrigated Shallot Farming in Some Coastal Regions of Ghana. *Journal of Applied Engineering and Technological Science (JAETS)*. https://doi.org/10.37385/jaets.v5i2.4185

5. **DEK Dzebre** (2024). A Comparison of The Levelised Cost of Energy of Different Energy Sources for Irrigated Shallot Farming in Some Coastal Regions of Ghana. *Journal of Applied Engineering and Technological Science (JAETS)*.

6. **Denis Edem K Dzebre**, Charlotte Asiedu, Eric Akowuah, Samuel Boahen, Kofi Owura Amoabeng, David Oppong (2024). An Assessment of the impacts of selected Meteorological and Land Use Land Cover Datasets on the accuracy of wind speeds downscaled with the Weather Research and Forecasting Model for coastal areas in Ghana. *Journal of Renewable Energies*. https://doi.org/10.54966/jreen.v27i1.1162

7. Rosa ME Djangba, **Denis EK Dzebre**, Muyiwa S Adaramola (2024). Wind-powered irrigation in Ghana: A review. *Wind Engineering*. https://doi.org/10.1177/0309524x241250055

8. Samuel Boahen, Kwadwo Boateng Ofori-Amanfo, Kofi Owura Amoabeng, Godwin Ayetor, George Yaw Obeng, Richard Opoku, **Dennis Edem Dzebre** (2023). Fault detection model for a variable speed heat pump. *Journal of Engineering and Applied Science*. https://doi.org/10.1186/s44147-023-00216-6

9. Enoch Asuako Larson, Samuel Adu-Gyamfi, Abankwa Omari Ebenezer, Milku Kwame Augustine, Philip Yamba, Salifu Tahiru Azeko, **Denis E K Dzebre** (2023). Influencing effects of variant laser pulse energy on fatigue behavior induced by LSP. *Emerging Materials Research*. https://doi.org/10.1680/jemmr.22.00217

10. Lena Dzifa Mensah, **Dzebre D.E.K.** (2022). CHARACTERISATION OF A FIBRE REINFORCED MATERIAL FOR SMALL WIND TURBINE APPLICATIONS. *Journal of Sustainable Energy*. https://www.researchgate.net/profile/Denis-Dzebre/publication/365726852_CHARACTERISATION_OF_A_FIBRE_REINFORCED_MATERIAL_FOR_SMALL_WIND_TURBINE_APPLICATIONS/links/63803b9b554def61936b91b9/CHARACTERISATION-OF-A-FIBRE-REINFORCED-MATERIAL-FOR-SMALL-WIND-TURBINE-APPLICATIONS.pdf

11. Godwin Kafui Ayetor, **Denis Kwame Edem Dzebre**, Lena Dzifa Mensah, Samuel Boahen, Kofi Owura Amoabeng, Godwin Fabiola Kwaku Tay (2022). Comparing the Cost per Mile of Electric Vehicles and Internal Combustion Engine Vehicles in Ghana. *Transportation Research Record Journal of the Transportation Research Board*. https://doi.org/10.1177/03611981221135804

12. Prince Yaw Andoh, L D Mensah, **D E K Dzebre**, Kofi Owura Amoabeng, Charles Kofi Kafui Sekyere (2022). Investigating The Failure of Leaf Springs in Automobile Suspension on Ghana Road. *Journal of Applied Engineering and Technological Science (JAETS)*. https://doi.org/10.37385/jaets.v4i1.508

13. Prince Yaw Andoh Andoh, Kofi Owura Amoabeng, Charles Kofi Kafui Sekyere, **D E K Dzebre** (2022). Performance Analysis of a Mechanical System To Break and Separate Palm Nut-Fibre Cake. *Journal of Applied Engineering and Technological Science (JAETS)*. https://doi.org/10.37385/jaets.v4i1.509

14. **Denis E.K. Dzebre**, J. Ampofo, Muyiwa S. Adaramola (2021). An assessment of high-resolution wind speeds downscaled with the Weather Research and Forecasting Model for coastal areas in Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2021.e07768

15. Prince Yaw Andoh Andoh, Charles Kofi Kafui Sekyere, L. D. Mensah, **D. E.K. Dzebre** (2021). Forecasting Electricity Demand In Ghana With The Sarima Model. *Journal of Applied Engineering and Technological Science (JAETS)*. https://doi.org/10.37385/jaets.v3i1.288

16. **Denis E.K. Dzebre**, Muyiwa S. Adaramola (2019). A preliminary sensitivity study of Planetary Boundary Layer parameterisation schemes in the weather research and forecasting model to surface winds in coastal Ghana. *Renewable Energy*. https://doi.org/10.1016/j.renene.2019.06.133

17. **Denis E.K. Dzebre**, Akwasi A. Acheampong, Joshua Ampofo, Muyiwa S. Adaramola (2019). A sensitivity study of Surface Wind simulations over Coastal Ghana to selected Time Control and Nudging options in the Weather Research and Forecasting Model. *Heliyon*. https://doi.org/10.1016/j.heliyon.2019.e01385

18. **Denis E.K. Dzebre**, Muyiwa S. Adaramola (2019). Impact of Selected Options in the Weather Research and Forecasting Model on Surface Wind Hindcasts in Coastal Ghana. *Energies*. https://doi.org/10.3390/en12193670

19. SM Sackey, **DEK Dzebre** (2015). Development of indigenous automobile design and manufacturing in Ghana. *African Journal of Applied Research*. https://ajaronline.com/index.php/AJAR/article/view/81

Theses 2

1. **DEK Dzebre** (2019). Sensitivity analyses of the Weather Research and Forecasting model for wind resources assessment in coastal Ghana. *Norwegian University of Life Sciences (NMBU), Ås, Norway*. https://scholar.google.com/scholar?cluster=13958582501156126 61&hl=en&oi=scholarr
2. **EDK Dzebre** (2012). Contribution of locally designed and fabricated vehicle-seats to accident injuries. *Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana.*. https://scholar.google.com/scholar?cluster=4282417714074156994&hl=en&oi=scholarr