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CURRENT POSITIONS:

- **Assistant Lecturer**, Department of Electrical and Electronic Engineering, KNUST, Kumasi.
- **Industrial Training Coordinator**, Department of Electrical and Electronic Engineering, KNUST, Kumasi.
- **Engineering in Society Coordinator**, Department of Electrical and Electronic Engineering, KNUST, Kumasi.

ACADEMIC DEGREES

2022 PhD candidate till date, KNUST, Kumasi, Ghana.

2021 **MPhil** in Power Systems Engineering, KNUST, Kumasi, Ghana.

2018 **Bachelor of Science (BSc)** in Electrical and Electronic Engineering, KNUST, Kumasi, Ghana.

RESEARCH STAY

April 2024- June 2024 Technical University of Munich (TUM)-Energy Management Technology Professorship.

PREVIOUS WORK EXPERIENCE

Mar 2021-Mar 2021 **Research Team Member**, Development of Ghana Northern Tourism Enclave (NorTe) Master Plan, Amalgamated Group and SPAYSIS.

Sept 2018-Aug 2019 **Teaching Assistant**, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.

Sep 2013-Aug 2014 **Tutor**, Swedru International School (SWIS), Agona Swedru, Ghana.

SERVICE AND LEADERSHIP

- 1). March 2022 - date: **Member**, Coordinating Committee on Stakeholder Engagement, Faculty of Electrical and Computer Engineering, KNUST, Kumasi, Ghana.
- 2). March 2022 – Date: **Member**, Industrial Liason Committee, Faculty of Electrical and Computer Engineering, KNUST, Kumasi, Ghana.
- 3). January 2022 – date: **Industrial Training Coordinator**, Department of Electrical and Electronic, KNUST, Kumasi, Ghana.
- 4). January 2022 – date: **Engineering in Society Coordinator**, Department of Electrical and Electronic, KNUST, Kumasi, Ghana.

UNIVERSITY TEACHING

FIRST SEMESTER			SECOND SEMESTER		
Code	Course Name	Credits	Code	Course Name	Credits
<i>Undergraduate</i>			<i>Undergraduate</i>		
EE 151	Applied Electricity	3	EE 162	Electromechanical Energy Conversion and Transformers	3
CENG 291	Engineering in Society	2	EE 152	Basic Electronics	3
EE 365	Electrical Services Design	2	EE 497	Project II	5
EE 463	Special Electrical Machines	3	EE 156	Electrical Engineering Drawing	2
EE 489	Industrial Training	1			
EE 497	Project I	3			
Total		14	Total		13

PUBLICATIONS

Journal Publication

- 1) **Kwegyir, D.**, Effah, F., Opoku, D., Asigri, P., Hayford, Y., Boateng, E., Kessey-Antwi, K., Abdul-Bassit Munagah, N. M., & Tamakloe, K. (2024). Analysis of the Potential of Different Air Conditioner Brands for Piezoelectric Energy Harvesting. *Journal of Applied Research in Electrical Engineering*, (), -. doi: 10.22055/jaree.2024.45352.1089
- 2) **Kwegyir, D.**, Terkper, M. D., Effah, F. B., Anto, E. K., & Lumor, S. G. (2024). Improved Driving Training-Based Optimization Algorithm Using Levy Flight and Crowding Distance Techniques. *Research Reports on Computer Science*, 3(1), 12–28. <https://doi.org/10.37256/rrcs.3120244384>
- 3) **Kwegyir, D.**, Effah, F. B., Opoku, D., Asigri, P., & Frimpong, E. A. (2023). Short-Term EV Charging Demand Forecast with Feedforward Artificial Neural Network. *JURNAL NASIONAL TEKNIK ELEKTRO*, 12(2). <https://doi.org/10.25077/jnte.v12n2.1094.2023>
- 4) Asigri, P., **Kwegyir, D.**, Effah, F. B., Osei-Mensah, E., Ofori-Yeboah, N. K. K. and Senya, E. K. (2023). Design and Implementation of a Low-Cost Combined Cooling and Tracking Solar PV System. *ADRRI Journal of Engineering and Technology*, Ghana: Vol. 7, No.1 (6), Pp.1-18, E-ISSN: 2026-674X, 30th June, 2023.
- 5) Kwarteng Y. M., F. B. Effah, **Kwegyir D.**, and E. A. Frimpong, “ANN-Based Electricity Theft Classification Technique for Limited Data Distribution Systems,” vol. 12, no. 1, 2023, *J. Nasional and T. Elektro*,
- 6) B. N. Atanga, F. B. Effah, **D. Kwegyir**, and P. Y. Okyere, “Optimal Tuning of Pi-controller of Shunt Active Power Filter for Harmonics Mitigation using Enhanced Jumping Spider Algorithm.” *Carpathian Journal of Electrical Engineering*.
- 7) **Kwegyir, D.**, Frimpong, E. A. and Opoku, D. (2021). Optimization of feedforward neural network training using modified local leader phase spider monkey optimization. *International Research Journal of Engineering and Technology*, 8(7), 2157-2167.
- 8) **Kwegyir, D.**, Frimpong, E. A. and Opoku, D. (2021). Modified Local Leader Phase Spider Monkey Optimization Algorithm, *ADRRI Journal of Engineering and Technology*, 5(2), 1-19.
- 9) E. Twumasi, E. A. Frimpong, **D. Kwegyir**, and D. Folitse, “Improvement of GreySystem Model using Particle Swarm Optimization,” *J. Electr. Syst. Inf. Technol.*, vol. 8, no. 1, 2021.

- 10) E.O. Addo, E. Twumasi , and **D. Kwegyir**, “Improvement of Particle Swarm Optimization Using Personal Best Adaptive weight,” International Journal of Innovative Science and Research Technology, vol. 6, no. 9, 2021.

Conference publication

- 1) E. Twumasi, E. A. Frimpong, **D. Kwegyir**, and D. Folitse, “Improvement of GreySystem Model using Particle Swarm Optimization,” 2020IEEE PES/IAS PowerAfrica, PowerAfrica 2020, pp.0-4,2020.

WORKSHOP/ PROJECT/ INTERNSHIPS

4 Sept-17 Sept 2021	Participant , Rethinking waste: Sustainable Solid Waste Management KNUST-ETH Summer School.
Feb 2021-Feb 2021	Participant , Siting of 18kW Solar PV farm for Yeboakrom, Kumasi, Ghana, KNUST SEED Center.
Oct 2020-Nov 2020	Intern , Kumasi Hive, Kumasi, Ghana.
Jun 2017-Jul 2017	Intern , Ghana Grid Company (GRIDCo), Tema, Ghana.

PROGRAMMING LANGUAGE AND SOFTWARE

MATLAB – Proficient

OriginPro – Proficient

Microsoft Word, PowerPoint, Excel and Visio – Proficient

Weka Machine Learning Software – Proficient

HOBBIES

I love reading, researching and offering counsel to people on their problems.