Prof. Anthony Agyei-Agyemang

Department of Mechanical Engineering
Kwame Nkrumah University of Science and Technology

ORCID 0000-0002-3483-8421 · Google Scholar scholar.google.com/citations?user=gxFcxY8AAAAJ&hl=en · Profile knust.peerford.com/staff/02572057-b645-4aba-b593-f6989cad2da9

RESEARCH

Interests	Road and Air Transport Safety · the use of numerical methods · especially · finite element method in Solid and Fluid Mechanics applications in Machine Design · Energy and Environmental Protection
Areas	Mechanical Engineering · Electrical and Electronic Engineering · Biomedical Engineering · Renewable Energy, Sustainability and the Environment · Building and Construction · Environmental Engineering

RESEARCH SUMMARY

36	142	5	4	0.61	10%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 36 publications listed below, 2009–2026. Field-weighted impact is the mean over the 21 works scored for it; 1.00 is the world average for works of the same field, type and year. 2 of the 21 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Lecturer 2004–present
Mechanical Engineering, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

PUBLICATIONS

Journal articles 36

1. Michael Kwabena Boadu, **Anthony Agyei-Agyemang**, Prince Yaw Andoh, Faisal Wahib Adam (2026). Assessment of Mechanical Behaviour Trends of Surface-Ground AA7075 Thin Plate Across Run Orders. *Advances in Mechanical and Materials Engineering*. https://doi.org/10.7862/rm.2026.3
2. Michael Kwabena Boadu, **Anthony Agyei-Agyemang**, Faisal Adam (2026). Effects of Surface Grinding Parameters on the Apparent Elastic Modulus of AA7075 Thin Plate. *International Journal of Engineering and Management Sciences*. https://doi.org/10.21791/ijems.2026.09
3. Michael Boadu, **Anthony Agyei-Agyemang**, Prince Andoh, Faisal Adam (2026). Modelling and Optimisation of Resilience and Corrosion Rate of Aluminium 7075 Thin Plate during Surface Grinding. *MUST Journal of Research and Development*.. https://doi.org/10.62277/mjrd2026v7i20001
4. Michael Kwabena Boadu, **Anthony Agyei-Agyemang**, Prince Yaw Andoh (2026). Multi-objective optimization of corrosion current density and polarization resistance of surface-ground AA7075 thin plate in 3.5 wt.% NaCl solution. *Advances in Mechanical and Materials Engineering*. https://doi.org/10.7862/rm.2026.8
5. Michael Kwabena Boadu, **Anthony Agyei-Agyemang**, Prince Y. Andoh, Faisal W. Adam (2026). Multi-response optimization of tensile strength and total elongation of aluminum 7075 plate after surface grinding. *Journal of the Ghana Institution of Engineering (JGhIE)*. https://doi.org/10.56049/jghie.v26i1.301
6. B.A. Asaaga, E.W. Ramde, F.K.A. Nyarko, **A. Agyei-Agyemang** (2025). Development of electrical power cycles for photovoltaic module power dispatch modelling. *Results in Engineering*. https://doi.org/10.1016/

j.rineng.2025.107288

7. Michael Boadu, **Anthony Agyei-Agyemang**, Prince Andoh, Faisal Adam (2025). Effects of Surface Grinding Parameters on the Surface Roughness of Aluminum 7075 Thin Plate. *Journal of Amasya University the Institute of Sciences and Technology*. https://doi.org/10.54559/amesia.1813507
8. Michael Boadu, **Anthony Agyei-Agyemang**, Prince Andoh, Faisal Adam (2025). Sequential Trends in Corrosion Behaviour of Surface-Ground Aluminium 7075 Thin Plates in 3.5 wt% NaCl Solution. *MUST Journal of Research and Development*.. https://doi.org/10.62277/mjrd2025v6i30002
9. David Kofi Oppong, Joshua Ampofo, Eunice Akyereko Adjei, **Anthony Agyei-Agyemang**, Kwasi Kete Bofah, God'sable Sitsofe Koku Aidam, Mary Korkor Teye, Charulatha Siva, Samuel Vivek Williams (2024). A method for determining the attitude of a small unmanned aerial vehicle using sensor error information and a neural network. *Indian Journal of Engineering and Materials Sciences*. https://doi.org/10.56042/ijems.v31i6.10367
10. D Oppong, EA Adjei, **A Agyei-Agyemang** (2024). Unmanned Aerial Vehicle Attitude Determination Strategies: A Review. *Journal of Advanced Mechanical Sciences*. http://research.jamsjournal.com/index.php/jamsjournal/article/view/59
11. Joseph Nyumutsu, **Anthony Agyei-Agyemang**, Prince Yaw Andoh, Peter Oppong Tawiah, Benjamin Atribawuni Asaaga (2023). The Potential of Sawdust and Coconut Fiber as Sound Reduction Materials. *Journal of Applied Engineering and Technological Science (JAETS)*. https://doi.org/10.37385/jaets.v4i2.624
12. Michael Kweku Commeh, **Anthony Agyei-Agyemang**, Peter Oppong Tawiah, Benjamin Atribawuni Asaaga (2022). CFD analysis of a flat bottom institutional cookstove. *Scientific African*. https://doi.org/10.1016/j.sciaf.2022.e01117
13. **Anthony Agyei-Agyemang**, George Yaw Obeng, John Kwasi Afriyie, Benjamin Atribawuni Asaaga (2022). Effects of roof angle, inlet gap size and dryer height on temperature and relative humidity in a chimney-dependent solar crop dryer. *Renewable Energy and Environmental Sustainability*. https://doi.org/10.1051/rees/2022006
14. **A Agyei-Agyemang** (2022). Effects of roof angle, inlet gap size and drying time on dryer mass flow rate and moisture content in a chimney-dependent solar crop dryer using design of experiment (DOE). *Al-Qadisiyah Journal For Engineering Sciences*. https://qjes.qu.edu.iq/article_179074.html
15. **Anthony Agyei-Agyemanga**, Peter Oppong Tawiaha, John K. Afriyieb, Michael K. Commehc (2022). Effects of roof angle, inlet gap size and drying time on dryer mass flow rate and moisture content in a chimney-dependent solar crop dryer using design of experiments (DOE). *Al-Qadisiyah Journal for Engineering Sciences*. https://doi.org/10.30772/qjes.v15i1.802
16. **Anthony Agyei-Agyemang**, Michael Kweku Commeh, Peter Oppong Tawiah, Benjamin Atribawuni Asaaga (2022). Numerical Modeling of a Hot Plate Stove for Peanut Roasting. *Journal of Engineering*. https://doi.org/10.1155/2022/9523767
17. **Anthony Agyei-Agyemang**, Peter O. Tawiah, John K. Afriyie, Michael K. Commeh (2022). The Effects of roof angle, inlet gap size and drying time on dryer mass flow rate and moisture content in a chimney-dependent solar crop dryer using design of experiments (DOE). *Al-Qadisiyah Journal for Engineering Sciences*. https://doi.org/10.30772/qjes.v15i1.821
18. Prince Yaw Andoh, **Anthony Agyei-Agyemang**, Peter Oppong Tawiah, Charles Kofi Kafui Sekyere, Charles McCarthy Asante (2021). Development of Composite Material for Wind Turbine Blades. *Journal of Applied Engineering and Technological Science (JAETS)*. https://doi.org/10.37385/jaets.v2i2.211
19. PY Andoh, **A Agyei-Agyemang**, PO Tawiah (2021). OPTIMIZAING THE WEIGHT CLOGGED OF A VIBRATING SCREEN DURING MINING OPERATIONS. *Journal of Science and Technology*. https://journal.knust.edu.gh/index.php/just/article/view/1236
20. G. Takyi, A.S. Adunyah, **A. Agyei-Agyemang** (2021). Performance evaluation of monocrystalline and polycrystalline silicon solar photovoltaic modules under low and high irradiance conditions in Kumasi, Ghana. *Nigerian Journal of Technology*. https://doi.org/10.4314/njt.v40i3.8
21. Kenneth Donkor, George Yaw Obeng, Richard Opoku, **Anthony Agyei-Agyemang** (2021). Production

processes and statistical analysis of ceramic liner-hole parameters for sustainability and improved thermal efficiency of clean biomass stoves. *Renewable Energy and Environmental Sustainability*. https://doi.org/10.1051/rees/2021023

22. **Anthony Agyei-Agyemang**, Richard Opoku, Charles K.K. Sekyere, Anthony Agyei-Agyeman, Godwin R. Deyegbe (2021). The cost of a transition to electric vehicles in Africa: A case study of Ghana. *Case Studies on Transport Policy*. https://doi.org/10.1016/j.cstp.2021.12.018
23. M Commeh, **A. Agyei-Agyemang** (2020). Flat bottom pot institutional cookstove: Assessing the efficiency and power with and without a blower. *international journal of chemical sciences*. https://www.academia.edu/download/100044395/flat-bottom-pot-institutional-cookstove-assessing-the-efficiency-and-power-with-and-without-a-blower.pdf
24. Peter Oppong Tawiah, **A Agyemang** (2017). Impact of noise in the industry and commercial areas in ghana: case study of the Kumasi metropolis. *Int. J. Eng. Res. Appl*. https://scholar.google.com/scholar?cluster=16258197377288281083&hl=en&oi=scholarr
25. MK Commeh, **A Agyei-Agyemang** (2017). Improved Institutional Cookstoves: An Assessment of the Efficiency in its Application in the agro and food processing industry in Ghana. *World*. https://www.academia.edu/download/100044394/171020171423.pdf
26. PY Andoh, **A Agyei-Agyemang**, PO Tawiah (2017). Model for the Prediction and Optimization of Flaws and Material Removal Rate during Machining of Shafts in Ghana. *Journal of Science and Technology (Ghana)*. https://www.researchgate.net/profile/Michael-Kwabena-Boadu-2/publication/361616712_Model_for_the_Prediction_and_Optimization_of_Flaws_and_Material_Removal_Rate_during_Machining_of_Shafts_in_Ghana/links/62bca649f9dee438e8cbcd0a/Model-for-the-Prediction-and-Optimization-of-Flaws-and-Material-Removal-Rate-during-Machining-of-Shafts-in-Ghana.pdf
27. PO Tawiah, PY Andoh, **A Agyei-Agyemang**, F Nyarko (2016). Characterization of Recycled Plastics for Structural Applications. *International Journal of Science and Technology*. https://www.academia.edu/download/55808500/3379145761289.pdf
28. PY Andoh, PO Tawiah, **A Agyei-Agyemang** (2016). Characterization of the Mechanical Properties of Ghanaian Bamboo for Structural Applications. *International Journal of Science and Technology*. https://scholar.google.com/scholar?cluster=22533788608939640 90&hl=en&oi=scholarr
29. **AA Agyemang** (2015). Mechanical Efficiency and Frictional Power Losses-The Use of Fuel From Eopss Against Base Fuel From Tema Oil Refinery, Ghana. *AFRICAN JOURNAL OF APPLIED RESEARCH*. https://ajaronline.com/index.php/AJAR/article/view/102
30. S Sackey, **A Agyei-Agyemang** (2015). Status of Maintenance Engineering in Ghanaian Manufacturing Industry. *African Journal of Applied Research*. https://ajaronline.com/index.php/AJAR/article/view/97
31. **Anthony Agyei-Agyemang** (2014). An Experimental Analysis of Brake Efficiency Using Four Flluids in a Drum Brake System. *Research Journal of Applied Sciences, Engineering and Technology*. https://www.airitilibrary.com/Article/Detail/20407467-201406-201511180029-201511180029-4851-4858
32. **F Agyei-Agyemang**, PO Tawiah, F Nyarko (2014). Efficient charcoal stoves: enhancing their benefits to a developing country using an improved design approach. *International Journal of Engineering Trends and Technology*. https://scholar.google.com/scholar?cluster=6639243214729803857&hl=en&oi=scholarr
33. **A. Agyei-Agyemang**, G. Y. Obeng, P. Y. Andoh (2014). Experimental Evaluation of the Attenuation Effect of a Passive Damper on a Road Vehicle Bumper. *World Journal of Engineering and Technology*. https://doi.org/10.4236/wjet.2014.23021
34. **Agyei-Agyemang** (2013). An Experimental Analysis of Brake Efficiency using four Fluids in a Disk Brake System. *Research Journal of Applied Sciences, Engineering and Technology*.
35. **S Agyei-Agyemang** (2013). Modeling of the Bumper as an Impact Attenuation Device. *International Journal of Scientific & Engineering Research*.
36. **A Agyei-Agyemang**, P Akangah (2009). Optimisation of Plate Thickness Using Finite Difference Method. *Journal of Science and Technology (Ghana)*. https://doi.org/10.4314/just.v28i3.33114