Eric Amoah Asante

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RESEARCH

Interests	Agricultural Machinery Design · Discrete Element Modelling
Areas	Plant Science · Mechanical Engineering · Biomedical Engineering · Civil and Structural Engineering · Electrical and Electronic Engineering · Horticulture

RESEARCH SUMMARY

33	422	8	6	1.91	16%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 33 publications listed below, 2011–2026. Field-weighted impact is the mean over the 25 works scored for it; 1.00 is the world average for works of the same field, type and year. 4 of the 25 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Senior Lecturer 2020–present
Agricultural and Biosystems Engineering, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Lecturer 2008–present
Mechanical Engineering, Koforidua Polytechnic, Koforidua, Ghana

EDUCATION AND QUALIFICATIONS

PhD in Agricutural Engineering 2014–present
School of Agricultural Equipment Engineering, Jiangsu University, Zhenjiang, China

PUBLICATIONS

Journal articles 33

1. Randy Amuaku, **Eric Amoah Asante**, Emmanuel Y.H Bobobee, Jerry Oppong Adutwum, Godwin Amanor (2026). Effect of maturity and the colour parameters on the cocoa opening force using the existing mechanical system. *Research in Agricultural Engineering*. https://doi.org/10.17221/149/2025-rae
2. KA Budu, WA Agyare, E Bessah, **EA Asante**, Francis Kumi (2026). Influence of tillage and mulching practices on growth, yield, and grain quality of Cowpea (Vigna Unguiculata L.). *Crop Design*. https://www.sciencedirect.com/science/article/pii/S2772899426000352
3. Samuel Appah, Christopher A. Ayambire, **Eric Amoah Asante** (2025). Charged Pesticide Spray Swath and Volumetric Droplets Distribution Impact by Nozzle Types, Spacing and Height. *Journal of Science and Technology (Ghana)*. https://doi.org/10.4314/just.v43i4.5
4. David Amidu Wandusim, Emmanuel Y H Bobobee, Joseph Oppong Akowuah, **Eric Amoah Asante**, Michael Amponsah Ampomah, Abebrese Kwabena Agyeman, Philip Yaro Laari (2025). Performance modelling and optimization of disc angle and tractor speed for a disc ridger in loamy soil using RSM. *International Journal of Agricultural Research Innovation and Technology*. https://doi.org/10.3329/ijarit.v15i1.82759
5. Samuel Appah, **Eric Amoah Asante**, Christopher Amigangre Ayambire (2024). Analogous Charging Effect

of Surfactant-Pesticide Spray Jet on Droplet Characteristics and Deposition on Hydrophobic Leaf Surfaces. *European Journal of Agriculture and Food Sciences*. https://doi.org/10.24018/ejfood.2024.6.1.757

6. Johnson Opoku-Asante, Emmanuel Bobobee, Joseph O Akowuah, **Eric Amoah Asante**, Albert Kumi Arkoh (2024). Comparative analysis of mechanical properties of paddy rice for different variety-moisture content interactions. *International Journal of Agricultural Research Innovation and Technology*. https://doi.org/10.3329/ijarit.v14i1.74525
7. KA Budu, JO Akowuah, EYH Bobobee, **EA Asante** (2024). Determination of drying performance of different slice thicknesses from different cassava varieties using hybrid dryer. *Solar Compass*. https://www.sciencedirect.com/science/article/pii/S2772940024000316
8. **Eric Amoah Asante**, Joseph Oppong Akowuah, Eric Asante Amoah, Joseph Ofei Darko (2024). Enhancing cassava grater design: A customer-driven approach using AHP, QFD, and TRIZ integration. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e36167
9. Johnson Opoku Asante, Emmanuel Bobobee, Joseph O Akowuah, **Eric Amoah Asante** (2024). Evaluation of integrated threshing and drying design concepts for paddy rice using analytical hierarchy process. *International Journal of Agricultural Research Innovation and Technology*. https://doi.org/10.3329/ijarit.v14i1.74526
10. Amuaku Randy, **Eric Asante**, E. Bobobee, Godwin Amano (2024). Mechanised Removal of Cocoa Beans from the Pod and Strategies to Optimize the Technique: A Review. *American Journal of Agriculture and Forestry*. https://doi.org/10.11648/j.ajaf.20241203.15
11. **EA Asante** (2024). Relative Effect of Tillage Methods and Weeding Regimes on Seasonal Weeds Biomass and Maize Performance. *Journal of Agriculture, Food, Environment and Animal Sciences*. https://www.jafeas.com/index.php/j1/article/view/239
12. Francis Amoah, **Eric Amoah Asante**, Randy Amuaku, Emmanuel Bobobee (2023). Cutting resistance assessment for three varieties of cassava roots. *Journal of the Ghana Institution of Engineering (JGhIE)*. https://doi.org/10.56049/jghie.v23i4.116
13. Randy Amuaku, **Eric Amoah Asante**, Timothy Abeo Apasiba, Emmanuel Y.H Bobobee (2023). Development and evaluation of a mechanical model for the assessment of cocoa pod opening force. *Journal of the Ghana Institution of Engineering (JGhIE)*. https://doi.org/10.56049/jghie.v23i4.111
14. Randy Amuaku, Godwin K. Amanor, Fehrs Adu-Gyamfi, **Eric Amoah Asante**, Eric Kweitsu, Samuel Opare (2023). Development and evaluation of agro-waste composite for sound insulation. *Journal of the Ghana Institution of Engineering (JGhIE)*. https://doi.org/10.56049/jghie.v23i4.115
15. Yongzong Lu, **Eric Amoah Asante**, Hongwei Duan, Yongguang Hu (2023). Quantitative Assessment of Cold Injury in Tea Plants by Terahertz Spectroscopy Method. *Agronomy*. https://doi.org/10.3390/agronomy13051376
16. **EA Asante** (2022). Performance of Absorptive Material Liners on Noise Transmission Loss in Mufflers used by Goods Carrying Tricycles. *Automotive Science and Engineering*. https://www.sid.ir/en/VEWSSID/J_pdf/1678-279952-en-1136705.pdf
17. **Eric Amoah Asante**, Michael Adusei-Bonsu, Randy Amuaku, Edward Ampaw (2021). Consistency of Frictional Temperature and Wear on Indicating the Critical Thickness for Disc Brake Replacement by Finite Element Model. *Advances in Applied Sciences*. https://doi.org/10.11648/j.aas.20210602.15
18. **Eric Amoah Asante**, Joseph Oppong Akowuah, Samuel Appah, George Obeng-Akrofi (2021). Mechanised Threshing of Pod Grains used as food and Strategies to Optimise the Technique: A Review. *JOURNAL OF ADVANCES IN AGRICULTURE*. https://doi.org/10.24297/jaa.v12i.9045
19. Samuel Appah, Mingxiong Ou, Weidong Jia, **Eric Amoah Asante**, Wanting Yang (2020). Assessing Nozzle Geometry, Spacing and Height Effect on Pesticide Spray Characteristics and Swath from Ground and Aerial Sprayers. *European Scientific Journal ESJ*. https://doi.org/10.19044/esj.2020.v16n30p103
20. **Eric Amoah Asante**, Zhe Du, Yongzong Lu, Yongguang Hu (2020). Detection and assessment of nitrogen effect on cold tolerance for tea by hyperspectral reflectance with PLSR, PCR, and LM models. *Information Processing in Agriculture*. https://doi.org/10.1016/j.inpa.2020.03.001

21. **Eric Amoah Asante**, Wilson Kwaku Kallai, John Bonney, Randy Amuaku (2020). Performance Evaluation of a Cowpea Thresher at Various Moisture Contents. *International Journal of Technology and Management Research*. https://doi.org/10.47127/ijtmr.v2i2.55

22. Samuel Appah, Weidong Jia, Mingxiong Ou, Pei Wang, **Eric Amoah Asante** (2019). Analysis of potential impaction and phytotoxicity of surfactant-plant surface interaction in pesticide application. *Crop Protection*. https://doi.org/10.1016/j.cropro.2019.104961

23. Randy Amuaku, **Eric Amoah Asante**, Ampaw Edward, George Bright Gyamfi (2019). Effects of Chamber Perforations, Inlet and Outlet Pipe Diameter Variations on Transmission Loss Characteristics of a Muffler Using Comsol Multiphysics. *Advances in Applied Sciences*. https://doi.org/10.11648/j.aas.20190406.11

24. Randy Amuaku, Wen Huabing, **Eric Amoah Asante**, Augustus Buckman (2019). Effects of Microcavity Local Resonators on the Bandgap Characteristics of a Two-Dimensional Phononic Crystal Structure. *Advances in Applied Sciences*. https://doi.org/10.11648/j.aas.20190405.11

25. Yongguang Hu, **Eric Amoah Asante**, Yongzong Lu, Ashraf Mahmood, Noman Ali Buttar, Shouqi Yuan (2018). A review of air disturbance technology for plant frost protection. *International journal of agricultural and biological engineering*. https://doi.org/10.25165/j.ijabe.20181103.3172

26. Ashraf Mahmood, Yongguang Hu, Josef Tanny, **Eric Amoah Asante** (2018). Effects of shading and insect-proof screens on crop microclimate and production: A review of recent advances. *Scientia Horticulturae*. https://doi.org/10.1016/j.scienta.2018.06.078

27. Yongguang Hu, **Eric Amoah Asante**, Yongzong Lu, Ashraf Mahmood, Noman Ali Buttar, Shouqi Yuan (2018). Review of air disturbance technology for plant frost protection. *International journal of agricultural and biological engineering*. https://doi.org/10.25165/ijabe.v11i3.3172

28. **Eric Amoah Asante**, Yongguang Hu, Rand Amuaku, Samuel Appah, Yongzhong Lu (2017). EFFECT OF OPEN AIR DRYING DURATION ON SEED MOISTURE AND THE THRESHING QUALITY OF COWPEA. *JOURNAL OF ADVANCES IN AGRICULTURE*. https://doi.org/10.24297/jaa.v7i1.5923

29. **EA Asante** (2017). Performance evaluation of a cowpea thresher at various moisture contents. *International Journal of Technology and Management Research*.

30. Yongzong Lu, Yongguang Hu, **Eric Amoah Asante**, Francis Kumi, Pingping Li (2016). Design of capacitance measurement module for determining critical cold temperature of tea leaves. *Sensing and Bio-Sensing Research*. https://doi.org/10.1016/j.sbsr.2016.09.005

31. **EA Asante** (2015). Airfoil optimization design for frost protection wind machines using Profili software. *International Agricultural Engineering Journal*. https://scholar.google.com/scholar?cluster=6919501247089218054&hl=en&oi=scholarr

32. **E Asante** (2014). Effect of storage and transportation challenges of Lbcs on the quality and postharvest losses of cocoa beans from enchi a, enchi b and sefwi wiawso cocoa districts in the …. *Kwame Nkrumah University of Science and Technology, Kumasi, Ghana*. https://scholar.google.com/scholar?cluster=5496179065300476662&hl=en&oi=scholarr

33. **EA Asante** (2011). Effect of mulch type, mulch rate and slope on soil loss, runoff and infiltration under simulated rainfall for two agricultural soils in Ghana. *Ph. D. Thesis*. https://scholar.google.com/scholar?cluster=14267310356329255349&hl=en&oi=scholarr