Akwasi Afrifa Acheampong

Department of Geomatic Engineering
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PROFILE

Akwasi Afrifa Acheampong is a Senior Lecturer in the Geomatic Engineering Department at Kwame Nkrumah University if Science & Technology (KNUST) and a Professional Engineer. He received his BSc, MPhil and PhD at Geomatic Eng., KNUST. Before joining academia, Afrifa was Land Surveyor and undertook most assignments including boundary surveys, engineering surveys for roads, airports, utilities mapping as well as volumetric computations for quarries and stockpiles. survey computations and adjustments, tropospheric modelling, open-source applications. His current research focuses on using GNSS technology for precise applications, low-cost receiver applications, GNSS Meteorology, smart cities and 3D cadastre. He is an active member of the Ghana Institutuion of Engineering.

RESEARCH

Interests	GPS/GNSS Meteorology · Surveying · Geodesy · Positioning · Navigation · GNSS · GIS · Tropospheric Delays · NWP · GPS
Areas	Aerospace Engineering · Oceanography · Astronomy and Astrophysics · Electrical and Electronic Engineering · Atmospheric Science · Civil and Structural Engineering

RESEARCH SUMMARY

26	156	6	5	3.67	27%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 26 publications listed below, 2008–2026. Field-weighted impact is the mean over the 22 works scored for it; 1.00 is the world average for works of the same field, type and year. 6 of the 22 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Senior Lecturer 2010–present
Geomatic Engineering Department, Kwame Nkrumah University of Science & Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

PhD 2012–2015
Geomatic Engineering Dept., Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

DISTINCTIONS, MEMBERSHIPS AND SERVICE

Professional Engineer 2015–present
Ghana Institution of Engineering, Accra, Ghana

PUBLICATIONS

Journal articles 26

1. Desmond Adu-Mensah, **Akwasi Afrifa Acheampong**, Philip Ato Kwamina Andoh (2026). Time series prediction of reservoir water level using deep learning: the case of Bui Dam in Ghana. *Journal of the Ghana Institution of Engineering (JGhIE)*. https://doi.org/10.56049/jghie.v26i1.249
2. Tangwam M, **Acheampong AA**, Fosu C (2024). Analysis of 3D positions processed from CORS in southern Ghana. *International Journal of Science and Research Archive*. https://doi.org/10.30574/ijsra.2024.11.2.0470
3. Osman Mohammed Abukari, **Akwasi Afrifa Acheampong**, Samuel Osah, John Ayer (2023). Assessing the Quality of Data from Continuously Operating Reference Stations in Ghana. *Journal of Science and Technology (Ghana)*. https://doi.org/10.4314/just.v41i3.1
4. Osman Mohammed Abukari, **Akwasi Afrifa Acheampong**, Samuel Osah, John Ayer (2023). Homogenizing coordinates through the use of the active CORS in Ghana. *South African Journal of Geomatics*. https://doi.org/10.4314/sajg.v12i.2.2
5. Osman Mohammed Abukari1, **Akwasi Afrifa Acheampong**, Collins Fosu (2022). Analysis of GNSS baseline solutions in Ghana. *South African Journal of Geomatics*. https://doi.org/10.4314/sajg.v8i1.1
6. Louis Osei-Poku, Long Tang, Wu Chen, Mingli Chen, **Akwasi Afrifa Acheampong** (2022). Comparative Study of Predominantly Daytime and Nighttime Lightning Occurrences and Their Impact on Ionospheric Disturbances. *Remote Sensing*. https://doi.org/10.3390/rs14133209
7. Samuel Osah, **Akwasi Afrifa Acheampong**, Isaac Dadzie, Collins Fosu (2022). Comparative evaluation and analysis of different tropospheric delay models in Ghana. *South African Journal of Geomatics*. https://doi.org/10.4314/sajg.v10i2.10
8. Osman Mohammed Abukari, **Akwasi Afrifa Acheampong**, Isaac Dadzie, Samuel Osah (2022). Congruence through repeatability of position solutions by different GNSS survey techniques. *South African Journal of Geomatics*. https://doi.org/10.4314/sajg.v11i2.8
9. Alex Osei-Akoto, **Akwasi Afrifa Acheampong**, Isaac Dadzie, John Ayer, Samuel Osmah (2022). Determination of position coordinates of the new active CORS in Ghana. *Journal of the Ghana Institution of Engineering (JGhIE)*. https://doi.org/10.56049/jghie.v22i1.25
10. Gameti Charles, **Acheampong Akwasi Afrifa**, John Ayer (2022). Development of GNSS software for Ghana Survey and Mapping Division. *South African Journal of Geomatics*. https://doi.org/10.4314/sajg.v11i1.10
11. Edward Boamah, **Akwasi Afrifa Acheampong** (2022). Electrification Planner for Ghana Using Open-Source Web GIS. *Journal of the Ghana Institution of Engineering (JGhIE)*. https://doi.org/10.56049/jghie.v22i1.14
12. **PE Akwasi Afrifa Acheampong**, CY Asante, AA Acheampong (2022). GIS mobile application for crime reporting and monitoring. *Ghana Journal of Technology*. https://scholar.google.com/scholar?cluster=10827586317750563 86&hl=en&oi=scholarr
13. Moses Yao Korbli, **Akwasi Afrifa Acheampong** (2022). Spatial dimensions of food and nutrition security in the Northern region of Ghana. *South African Journal of Geomatics*. https://doi.org/10.4314/sajg.v9i2.27
14. S. Osah, **A. A. Acheampong**, C. Fosu, I. Dadzie (2021). Comparative analysis of blind tropospheric correction models in Ghana. *Journal of Geodetic Science*. https://doi.org/10.1515/jogs-2020-0104
15. Samuel Osah, **Akwasi A. Acheampong**, Collins Fosu, Isaac Dadzie (2021). Deep learning model for predicting daily IGS zenith tropospheric delays in West Africa using TensorFlow and Keras. *Advances in Space Research*. https://doi.org/10.1016/j.asr.2021.04.039
16. Samuel Osah, **Akwasi A. Acheampong**, Collins Fosu, Isaac Dadzie (2021). Evaluation of Zenith Tropospheric Delay Derived from Ray-Traced VMF3 Product over the West African Region Using GNSS Observations. *Advances in Meteorology*. https://doi.org/10.1155/2021/8836806
17. Samuel Osah, **Akwasi A. Acheampong**, Collins Fosu, Isaac Dadzie (2021). Regression models for

predicting daily IGS zenith tropospheric delays in West Africa: Implication for GNSS meteorology and positioning applications. *Meteorological Applications*. https://doi.org/10.1002/met.2030

18. **AA Acheampong** (2020). Spatial dimensions of food and nutrition security in the Northern region of Ghana. *South African Journal of Geomatics*.
19. 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
20. AA Acheampong, **AA Acheampong** (2019). Analysis of GNSS baseline solutions in Ghana. *South African Journal of Geomatics*.
21. **A. Acheampong**, K. Obeng (2019). Application of GNSS derived precipitable water vapour prediction in West Africa. *Journal of Geodetic Science*. https://doi.org/10.1515/jogs-2019-0005
22. Joseph Apau, **Akwasi Acheampong**, Eric Adua (2018). Exposure to bisphenol A, bisphenol F, and bisphenol S can result in obesity in human body. *Cogent Chemistry*. https://doi.org/10.1080/23312009.2018.1506601
23. **A.A. Acheampong**, C. Fosu, L.K. Amekudzi, E. Kaas (2017). Precipitable water comparisons over Ghana using PPP Techniques and reanalysis data. *South African Journal of Geomatics*. https://doi.org/10.4314/sajg.v6i3.13
24. C. Y. Asante, **A. A. Acheampong**, C. Fosu (2016). INVESTIGATION OF HORIZONTAL AND VERTICAL CONTROLS ON KNUST CAMPUS. *Journal of Science and Technology (Ghana)*. https://doi.org/10.4314/just.v36i2.7
25. **A. A. Acheampong**, C. Fosu, L. K. Amekudzi, E. Kaas (2015). Comparison of precipitable water over Ghana using GPS signals and reanalysis products. *Journal of Geodetic Science*. https://doi.org/10.1515/jogs-2015-0016
26. **AA Acheampong** (2008). Developing a differential GPS (DGPS) Service in Ghana. *Kwame Nkrumah University of Science and Technology Msc Thesis*. https://scholar.google.com/scholar?cluster=14301812040669812001&hl=en&oi=scholarr