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RESEARCH

Interests	Pavement Geotechnics · geotechnical engineering · construction engineering
Areas	Civil and Structural Engineering · Building and Construction · Geophysics · Ocean Engineering · Waste Management and Disposal · Biomedical Engineering

RESEARCH SUMMARY

34	329	11	12	0.87	0%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 34 publications listed below, 1988–2025. Field-weighted impact is the mean over the 16 works scored for it; 1.00 is the world average for works of the same field, type and year. 0 of the 16 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Professor 2017–present
Civil Engineering Department, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

PhD 1988–1991
Civil Engineering Department, University of Tokyo, Tokyo, Japan

MSc 1986–1988
Civil Engineering Department, University of Tokyo, Tokyo, Japan

BSc 1977–1981
Civil Engineering Department, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

PUBLICATIONS

Journal articles 24

1. **SIK Ampadu**, FJF Ayeh, F Owusu Nimo, F Charkley (2025). A laboratory study of climate change and subgrade strength of a lateritic soil in a tropical environment. *E3S Web of Conferences*. https://www.e3s-conferences.org/articles/e3sconf/abs/2025/42/e3sconf_eunsat2025_03018/e3sconf_eunsat2025_03018.html
2. **SIK Ampadu**, FO Nimo, FJ Ayeh, F Charkley (2025). Climate change trends as measured by the Thornthwaite Moisture Index maps for Ghana. *E3S Web of Conferences*. https://search.proquest.com/openview/e0241d8fb1fe7712ad51c4436a3a28f3/1?pq-origsite=gscholar&cbl=2040555
3. **Samuel Ampadu**, Eric T. Mensah, Eric N. Aidoo, Alexander Boateng, Daniel Maposa (2023). A comparative study of error distributions in the GARCH model through a Monte Carlo simulation approach. *Scientific African*. https://doi.org/10.1016/j.sciaf.2023.e01988
4. Frederick Owusu-Nimo, Daniel Peprah-Manu, Felix J. Ayeh, Frederick Charkley, **Samuel I. K. Ampadu**

(2023). Compaction Verification of Lateritic Soil Using Electrical Resistivity: A Laboratory Study. *Geotechnical and Geological Engineering*. https://doi.org/10.1007/s10706-023-02598-z

5. **Samuel I.K. Ampadu**, David Thomas Arthur (2022). The field compaction of lateritic pavement layers in a tropical environment. *Transportation Engineering*. https://doi.org/10.1016/j.treng.2022.100120
6. A. K. Lawer, **S. I. K. Ampadu**, F. Owusu-Nimo (2021). The effect of randomly distributed natural fibers on some geotechnical characteristics of a lateritic soil. *SN Applied Sciences*. https://doi.org/10.1007/s42452-021-04634-0
7. **Samuel Ampadu**, Joseph X.F. Ribeiro, Aliyu M. Aliyu, Archibong Archibong-Eso, Umar D. Abubakar, Adegboyega B. Ehinmowo (2020). Characteristics of horizontal gas-liquid two-phase flow measurement in a medium-sized pipe using gamma densitometry. *Scientific African*. https://doi.org/10.1016/j.sciaf.2020.e00550
8. Fred Kofi Boadu, **Samuel Ampadu** (2019). Assessing Relations Between Electrical and Geotechnical Properties of Sand-clay Mixtures Using Jonscher Fractal Power Law Model. *Journal of Environmental and Engineering Geophysics*. https://doi.org/10.2113/jeeg24.1.77
9. **Samuel Innocent Kofi Ampadu**, Felix F. J. Ayeh, Fred Boadu (2018). Deriving SPT N-Values from DCP Test Results: The Case of Foundation Design in a Tropical Environment. *Geotechnical and Geological Engineering*. https://doi.org/10.1007/s10706-018-0480-4
10. **SIK Ampadu** (2017). A comparison between the life cycle cost of gravel and of bituminous surfacing options for feeder roads in Ghana. *International Journal of Pavement Engineering*.
11. **Samuel Innocent Kofi Ampadu**, Priscilla Ackah, Fred Owusu Nimo, Fred Boadu (2016). A laboratory study of horizontal confinement effect on the dynamic cone penetration index of a lateritic soil. *Transportation Geotechnics*. https://doi.org/10.1016/j.trgeo.2016.12.002
12. **Samuel Innocent Kofi Ampadu**, Frederick Kwamina Addison (2015). A comparison between the life cycle cost of gravel and of bituminous surfacing options for feeder roads in Ghana. *International Journal of Pavement Engineering*. https://doi.org/10.1080/10298436.2015.1065990
13. Stephen Agyeman, **Samuel IK Ampadu** (2015). Exploring the techno-economic feasibility of mine rock waste utilisation in road works: The case of a mining deposit in Ghana. *Waste Management & Research The Journal for a Sustainable Circular Economy*. https://doi.org/10.1177/0734242x15611739
14. **SI Ampadu** (2015). Forensic analysis of asphaltic pavement failures in Ghana: case histories. *paper presentation, Conference on Asphalt Pavements for Southern Africa [CAPSA15], Sun City, South Africa*. https://www.researchgate.net/profile/Joseph-Anochie-Boateng/publication/282022749_Forensic_Analysis_of_Asphaltic_Pavement_Failures_in_Ghana-Case_Histories/links/56018fb008ae42bbd541b573/Forensic-Analysis-of-Asphaltic-Pavement-Failures-in-Ghana-Case-Histories.pdf
15. **SIK Ampadu**, FJF Ayeh (2015). The Effect of Pretreatment on Index and Compaction properties of a Lateritic Gravel, Innovative Geotechnics for Africa. *Proceedings of 16th African Regional Conference on Soil Mechanics and Geotechnical Engineering, Bouassida, Khemakhem & Haffoudhi (Eds.)*. https://scholar.google.com/scholar?cluster=13661863466029865113&hl=en&oi=scholarr
16. **Samuel Innocent Kofi Ampadu**, Gilbert Jones Yao Fiadjoe (2015). The influence of water content on the Dynamic Cone Penetration Index of a lateritic soil stabilized with various percentages of a quarry by-product. *Transportation Geotechnics*. https://doi.org/10.1016/j.trgeo.2015.09.007
17. **S Ampadu**, F Owusu-Nimo, F Ayeh (2014). The Effect of Pretreatment on Compaction Characteristics of a Lateritic Gravel. *XVII Congresso Braseileiro de Mecânica dos Solos e Engenharia Geotécnica., Goiania, Brazil*. https://www.academia.edu/download/50010209/SP_8.pdf
18. Fred Kofi Boadu, Frederick Owusu-Nimo, Francis Achampong, **Samuel I.K. Ampadu** (2013). Artificial neural network and statistical models for predicting the basic geotechnical properties of soils from electrical measurements. *Near Surface Geophysics*. https://doi.org/10.3997/1873-0604.2013011
19. **Samuel Ampadu** (1994). Deformation and failure chracteristics of vertical cut and excavations. *Proceedings of Centrifuge 94*. https://cir.nii.ac.jp/crid/1571135649125509248

20. **SK Ampadu** (1992). Measurement of soil strength in simple shear tests: Discussion. *Canadian Geotechnical Journal*. https://doi.org/10.1139/t92-096
21. **SK Ampadu** (1991). Small strain stiffness and elasticity of clays in monotonic loading triaxial compression. *三軸試験法に関するシンポジウム発表論文集*. https://scholar.google.com/scholar?cluster=9326334356495272274&hl=en&oi=scholarr
22. **S Ampadu** (1991). Undrained behaviour of kaolin in torsional simple shear. *(No Title)*. https://cir.nii.ac.jp/crid/1920020909684535040
23. **S Ampadu** (1989). An automated stress-path control triaxial system. *Geotechnical Testing Journal*. https://dl.astm.org/gtj/article/12/3/238/1278
24. **SK Ampadu** (1988). The influence of initial shear on undrained Behavior of normally consolidated Kaolin. *Geotechnical Engineering Report, 東京大学生産技術研究所土質工学研究室*. https://scholar.google.com/scholar?cluster=17605559314597892632&hl=en&oi=scholarr

Book chapters 5

1. **SIK Ampadu** (2011). Correlation between the dynamic cone penetration index and the Falling Weight Deflectometer-determined subgrade resilient modulus. *Proceedings of the 15th African Regional Conference on Soil Mechanics and Geotechnical Engineering*. https://doi.org/10.3233/978-1-60750-778-9-446
2. **SIK Ampadu** (2009). Model tests for bearing capacity in a lateritic soil and implications for the use of the dynamic cone penetrometer. *Proceedings of the 17th International Conference on Soil Mechanics and Geotechnical Engineering (Volumes 1, 2, 3 and 4)*. https://www.researchgate.net/profile/David-Dzitse-Awuku-2/publication/290627967_Model_tests_for_bearing_capacity_in_a_lateritic_soil_and_implications_for_the_use_of_the_dynamic_cone_penetrometer/links/64bc5d18b9ed6874a53a5bee/Model-tests-for-bearing-capacity-in-a-lateritic-soil-and-implications-for-the-use-of-the-dynamic-cone-penetrometer.pdf
3. **Samuel Innocent Kofi Ampadu** (2007). A Laboratory Investigation into the Effect of Water Content on the CBR of a Subgrade soil. *Springer proceedings in physics*. https://doi.org/10.1007/3-540-69873-6_12
4. **Samuel I. K. Ampadu** (2007). The Loss of Strength of an Unsaturated Local Soil on Soaking. *Solid mechanics and its applications*. https://doi.org/10.1007/978-1-4020-6146-2_28
5. **SIK Ampadu** (2005). A correlation between the Dynamic Cone Penetrometer and bearing capacity of a local soil formation. *Proceedings of the 16th International Conference on Soil Mechanics and Geotechnical Engineering*. https://doi.org/10.3233/978-1-61499-656-9-655

Conference papers 5

1. **Samuel I. K. Ampadu**, Thomas D. Arthur, Priscilla Ackah, Fred Boadu (2021). Construction and Monitoring of the Short-Term Strength Development of a Cement-Stabilized Lateritic Pavement Layer Under Tropical Climatic Conditions. *Lecture notes in civil engineering*. https://doi.org/10.1007/978-3-030-77230-7_55
2. Thomas D. Arthur, **Samuel I. K. Ampadu**, Simon K. Y. Gawu (2021). The Potential of Quartzitic Rock for Use as Coarse Aggregates in Asphaltic Concrete. *Lecture notes in civil engineering*. https://doi.org/10.1007/978-3-030-77230-7_26
3. **SK AMPADU** (1996). Deformation and failure characteristics of vertical slopes in centrifuge tests. *Landslides*. https://pascal-francis.inist.fr/vibad/index.php?action=getRecordDetail&idt=6267977
4. **SK AMPADU** (1995). Undrained shear behaviour of a soft clay after cyclic loading. *Earthquake Geotechnical Engineering*. https://pascal-francis.inist.fr/vibad/index.php?action=getRecordDetail&idt=6311155
5. **SK AMPADU** (1994). Undrained shear characteristics of a soft clay after cyclic loading. *International symposium on pre-failure deformation characteristics of geomaterials*. https://pascal-francis.inist.fr/vibad/index.php?action=getRecordDetail&idt=6345938