Prof. Leonard Kofitse Amekudzi

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PROFILE

Leonard K. Amekudzi is a Professor of Atmospheric and Climate Science and immediate past Provost, College of Science at Kwame Nkrumah University of Science and Technology (KNUST), Kumasi. He holds a BSc Degree in Physics with DipEd, MPhil (Theoretical Physics) from the University of Cape Coast, Ghana, in 1997 and 2001. After completing one year of MSC course work at the Institute of Environmental Physics and Remote Sensing at the University of Bremen, Germany, in 2002, the European Space Agency (ESA) ENVISAT (Environmental Satellite) awarded him a PhD fellowship. He obtained a PhD in Atmospheric Physics and Satellite Remote Sensing in 2005 from the University of Bremen, Germany, and continued as a Post-Doctoral Research Scientist on the ESA ENVISAT project. On this project, he was involved in retrieving atmospheric trace gases information from occultation and limb observations of SCIAMACHY (Scanning Imaging Absorption Spectrometer for Atmospheric Cartography) until May 2008, when he joined KNUST as a Lecture in the Meteorology and Climate Science Programme at the Department of Physics. Leonard has over 18 years of research experience in Atmospheric and Climate Science, Remote Sensing, Biometeorology, precipitation processes, and Hydrological Modelling. He has worked extensively with different research clusters across the globe. Among the research-collaborated projects include; ENVISAT SCIAMACHY Limb and Occultation Validation (SCILOV), Quantifying Weather and Climate Impacts on Health in Developing Countries (QWeCI), Building Stronger Universities (BSU), West Africa Science Service Center for Climate Change and Adapted Land Use (WASCAL), Dynamic-Aerosol-Chemistry-Cloud interactions in West Africa (DACCIWA) and International Development Research Center - Climate Change Adaptation Research and Training Capacity for Development (IDRC-CCARTCD), Global Challenge Research Fund Africa Science for Weather Information and Forecasting Techniques (GCRF African SWIFT), Current and Future risks of urban and rural flooding in West Africa- An integrated analysis and ecosystem-based solutions (FURILOOD), and Green gas emissions and mitigation options under climate and land-use change in West Africa-A concerted regional modelling and assessment (CONCERT).

He was a regular research fellow at the Abdus Salam International Centre for Theoretical Physics. He has trained over a dozen M.SC/MPhil and PhD students and participated in local and international terrain research. He has also served as an external examiner to the Postgraduate Programme in Ghana and other African countries' universities. Besides, he serves as an advisory board member for local and international PhD programmes and a visiting professor to WASCAL-CCWR at Abomey-Calavi (Benin), WASCAL-CCHH, FUT-Minna, Nigeria and a Professor for the WASCAL Common Course in Atmospheric Science. He is a lead consultant for five different Climate and Environmental projects in Ghana, a resource person for climate and related impact workshops, a key speaker and facilitator of several climate change workshops in Ghana and other parts of Africa. He is a career guidance and counselling expert and is involved in science curriculum development for the school. He is a scientific mentor/host to young faculty members on the Climate Impact Research Capacity and Leadership Enhancement in Sub-Saharan Africa (CIRCLE) Programme. Leonard has over 70 publications in high-impact peer-reviewed journals and over 90 oral and poster presentations in international conferences, is an entrepreneur, a farmer, a practising Christian, married with three children (all boys).

RESEARCH

Interests	Atmospheric Physics · Atmospheric Remote Sensing · Tropical Meteorology · Climate change · Climate · Leonard Amekudzi Scholar details
Areas	Global and Planetary Change · Atmospheric Science · Ecology, Evolution, Behavior and Systematics · Ecology · Environmental Engineering · Health, Toxicology and Mutagenesis

RESEARCH SUMMARY

152	3,336	34	65	2.98	34%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 152 publications listed below, 2005–2026. Field-weighted impact is the mean over the 96 works scored for it; 1.00 is the world average for works of the same field, type and year. 33 of the 96 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Professor 2020–2028
Meteorology and Climate Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Professor and Provost 2019–2025
Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Associate Professor 2015–2020
Physics, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Postdoc 2006–2008
Institute of Environmental Physics and Remote Sensing, University of Bremen, Bremen, Germany

EDUCATION AND QUALIFICATIONS

PhD 2002–2005
Institute of Environmental Physics and Remote Sensing, Universität Bremen, Bremen, Germany

DISTINCTIONS, MEMBERSHIPS AND SERVICE

Provost 2019–2022
College of Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

PUBLICATIONS

Journal articles 135

1. Emmanuel Gyimah Annor, Cyril Dziedzorm Boateng, Jeffrey Nii Armah Aryee, **Leonard Kofitse Amekudzi** (2026). Atmospheric and oceanic controls of coastal upwelling in the northern Gulf of Guinea: insights from Keta, Ghana. *Frontiers in Marine Science*. https://doi.org/10.3389/fmars.2026.1953512
2. Fiifi Amoako Atta Panyin Essiam, M Amoako, Sameeratu Issah, Michael Biney, Kwadwo Owusu Akuffo, **Leonard Kofitse Amekudzi** (2026). Climate predictors of child undernutrition: Insights from a machine learning model. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0342448
3. GA Torsah, V Akyeampong, KA Adjei, **LK Amekudzi** (2026). Estimation of extreme rainfall using intensity-duration-frequency curves for Ashanti Region, Ghana. *Journal of Hydrology: Regional Studies*. https://www.sciencedirect.com/science/article/pii/S2214581826006166
4. Abraham Okrah, Jiacheng Zhao, Zhaozhong Feng, Genesis Magara, **Leonard K. Amekudzi** (2026). Heatwaves induce strong vegetation functional suppression rather than structural changes in Sub-Saharan Africa. *Agricultural and Forest Meteorology*. https://doi.org/10.1016/j.agrformet.2026.111351
5. P. Davies, O. Dombrowski, R. Baatz, H.-J. Hendricks Franssen, S. Guug, S. Sy, J. Bliefernicht, E. Quansah, **L.K. Amekudzi**, H. Kunstmann, H.R. Bogena (2026). Multi-variate validation of a high-resolution application of the Community Land Model (CLM5) in Ghana. *Journal of Hydrology Regional Studies*. https://doi.org/10.1016/j.ejrh.2026.103573

6. Patrick Davies, Roland Baatz, Paul Schattan, Emmanuel Quansah, **Leonard Kofitse Amekudzi**, Heye Reemt Bogena (2026). On the Variability of the Barometric Effect and Its Relation to Cosmic-Ray Neutron Sensing. *Sensors*. https://doi.org/10.3390/s26030925

7. Albert Elikplim Agbenorhevi, Julian Klaus, Valery Bessely Stanislas Kouassi, Ernest Biney, Nelly Carine Kelome, **Leonard Kofitse Amekudzi** (2026). Rainfall Onset Timing and Hydroclimatic Variability in a Tropical Catchment: Insights From Observations and Climate Projections. *Meteorological Applications*. https://doi.org/10.1002/met.70231

8. Francis E. Oussou, Ralf Kiese, Souleymane Sy, Jan Bliefernicht, Ines Spangenberg, Samuel Guug, Anja Schäfler-Schmid, Rainer Steinbrecher, Frank Neidl, Michael Ayamba, … **Leonard K. Amekudzi** and 12 others (2026). Soil nitrous oxide and methane emissions in contrasting land use of the West African Sudanian savanna. *Scientific Reports*. https://doi.org/10.1038/s41598-026-36221-x

9. Patrick Davies, Ossénatou Mamadou, Emmanuel Quansah, Jeffrey N. A. Aryee, Winifred A. Atiah, **Leonard K. Amekudzi**, Fredrick Sam, Sylvie Galle, Jérome Demarty (2026). Statistical Evaluation of Changes in Surface Radiative Flux Across Different Sites in West Africa. *Advances in Meteorology*. https://doi.org/10.1155/adme/3703490

10. Petra Holden, Gerald Ngoma, Martine Visser, **Leonard Kofitse Amekudzi**, Millicent Kwawu, Ebenezer Boahen, Eunice Boruru, Arthur Bostvironnois, Sampson Dordaa, Daniel Esukuku Ekai and 13 others (2026). Strengthening existing climate services and prioritising new opportunities for nature-based solutions. *npj Climate Action*. https://doi.org/10.1038/s44168-026-00417-8

11. Loretta Pearl Poku, Winifred Ayinpogbilla Atiah, **Leonard Kofitse Amekudzi** (2026). The Evidence of Climate Change in West Africa: The Role of the Multivariate El Niño-Southern Oscillation (ENSO) Index. *Meteorological Applications*. https://doi.org/10.1002/met.70184

12. Mary Amoako, Richard Oguah, Christopher Mensah, Fiifi Amoako Atta Panyin Essiam, Charles Martyn-Dickens, David Sugri Hamzah, **Leonard Amekudzi** (2026). The impact of climate variables on nutritional status of children 0-6 Years old In Africa - A systematic review. *Heliyon*. https://doi.org/10.1016/j.heliyon.2026.e44885

13. Steve Ampofo, Jeffrey N. A. Aryee, Thompson Annor, **Leonard K. Amekudzi** (2025). A half century dataset on ETCCDI annual precipitation indices for the Northern savanna agro-ecological zone (Ghana) and the entire country. *Discover Data*. https://doi.org/10.1007/s44248-025-00037-3

14. Mary J. Adjei, Edmund I. Yamba, Cascade Tuholske, Cosmos S. Wemegah, **Leonard K. Amekudzi** (2025). Assessing heat-related health risk in Ghana using bioclimatic indices. *Scientific African*. https://doi.org/10.1016/j.sciaf.2025.e02926

15. **Leonard K. Amekudzi or Leonard Amekudzi** (2025). Biophysical effects of land cover changes in West Africa: a systematic review. *Environmental Research Letters*. https://doi.org/10.1088/1748-9326/addbf4

16. Reuben Acheampong Asamoah, Gizaw Mengistu Tsidu, Gemechu Fanta Garuma, **Leonard Kofitse Amekudzi** (2025). Dynamic response of West African rainfall to the quasi-biennial oscillation. *Meteorology and Atmospheric Physics*. https://doi.org/10.1007/s00703-025-01093-9

17. Cosmos Senyo Wemegah, Edmund I. Yamba, Emmanuel Quansah, Emmanuel K. Nyantakyi, **Leonard K. Amekudzi** (2025). Evidence of Heatwaves: Characteristics and Trends in Selected Ghanaian Cities. *International Journal of Climatology*. https://doi.org/10.1002/joc.8889

18. Samuel Kyei-Manuh, Marian Amoakowaah Osei, Jeffrey N. A. Aryee, Emmanuel Quansah, Emmanuel Obuobie, **Leonard K. Amekudzi** (2025). Lightning and thunderstorms, the source of severe weather over Ghana, West Africa. *PLOS Climate*. https://doi.org/10.1371/journal.pclm.0000703

19. Samuel Guug, Souleymane Sy, Emmanuel Quansah, Jan Bliefernicht, Frank Neidl, Rainer Steinbrecher, Michael Ayamba, Alex Frempong, Patrick Davies, Ines Spangenberg, Francis E Oussou, Belko Aziz Diallo, Seyni Salack, Kwame Hackman, **Leonard K Amekudzi**, Kehinde Ogunjobi, Harald Kunstmann (2025). Methane emissions from rice cultivation in West Africa and compensation options from nature reserve forests. *Environmental Research Letters*. https://doi.org/10.1088/1748-9326/adc28c

20. **Leonard K. Amekudzi or Leonard Amekudzi** (2025). Natural sequestration of carbon dioxide is in decline: climate change will accelerate. *Weather*. https://doi.org/10.1002/wea.7668

21. Derrick K Danso, Kwesi T Quagraine, Akintomide A Akinsanola, **Leonard K Amekudzi**, Oluwafemi E Adeyeri (2025). Near-term heatwave risk in HighResMIP models across different temperature zones of West Africa. *Environmental Research Climate*. https://doi.org/10.1088/2752-5295/add31f

22. Reuben Acheampong Asamoah, Gizaw Mengistu Tsidu, Gemechu Fanta Garuma, **Leonard Kofitse Amekudzi** (2025). Observational Evidence of Distinct Excitation Pathways for Migrating and Non-Migrating Tides in the Mesosphere-Lower Thermosphere During the 2021 Sudden Stratospheric Warming. *Atmosphere*. https://doi.org/10.3390/atmos16111254

23. Baah Asare-Bediako, Faustina Awafu, Evans Y. Boakye, Emmanuel Boahen, Cyril D. Boateng, David D. Wemegah, Akyana Britwum, Michael K. E. Donkor, Jeffrey N. A. Aryee, Emmanuel K. Brempong, **Leonard K. Amekudzi** (2025). Shoreline change detection along the eastern coast of Ghana: leveraging GIS and advanced remote sensing techniques. *Scientific Reports*. https://doi.org/10.1038/s41598-025-98260-0

24. Edmund I. Yamba, Kingsley Badu, Thomas A. Kyeimiah, Nathaniel O. Abrokwah, Stephen Asare, Mary J. Adjei, Joyce Ama Johnson, **Leonard K. Amekudzi** (2025). Warming temperatures reduce lifespan and vectorial capacity of Anopheles mosquitoes in Ghana. *Infectious Disease Modelling*. https://doi.org/10.1016/j.idm.2025.12.011

25. Albert Elikplim Agbenorhevi, **Leonard Kofitse Amekudzi**, Nelly Carine Kèlomé, Ernest Biney, Ernestina Annan (2024). Analyzing land use and land cover change in the Pra River Basin: A multi-tool approach for informed decision-making. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2024.100922

26. **LK Amekudzi**, B Kyereh (2024). Assessment of soil carbon dioxide efflux from contrasting land uses in a semi-arid savannah ecosystem, northeastern Ghana (West Africa). *Scientific African*. https://www.sciencedirect.com/science/article/pii/S2468227624003624

27. Dakéga Saberma Ragatoa, **Leonard K. Amekudzi**, Andreas H. Fink, Marlon Maranan, Nana Ama Browne Klutse, Kodjovi S. Edjame, Kehinde O. Ogunjobi (2024). Droughts and heatwaves in the West African monsoon system. *International Journal of Climatology*. https://doi.org/10.1002/joc.8544

28. Jeffrey N.A. Aryee, Emmanuel M.N.A.N. Attoh, Edmund I. Yamba, Patrick Davies, **Leonard K. Amekudzi** (2024). Modelling atmospheric behaviour over southern West Africa using RegCM 4.7.1: Case assessment of relative humidity and zonal wind profiles based on the 2016 DACCIWA summertime field campaign. *Scientific African*. https://doi.org/10.1016/j.sciaf.2024.e02187

29. **L Amekudzi**, E Annan (2024). Predicting Global Change Impacts on streamflow Dynamics using EcH2O-iso Model in a Data-scarce Nested Tropical Catchment in West Africa. *WaterSciCon24*. https://scholar.google.com/scholar?cluster=7850493157636459159&hl=en&oi=scholarr

30. G.A. Torsah, M.A. Osei, J.N.A. Aryee, J.A.A. Oti, **L.K. Amekudzi** (2024). Triggers of inland heavy rainfall inducing convective storms in West Africa : Case study of June, 2021. *Weather and Climate Extremes*. https://doi.org/10.1016/j.wace.2024.100740

31. Mexoese Nyatuame, Sampson Agodzo, **Leonard Kofitse Amekudzi**, Bismark Mensah-Brako (2023). Assessment of past and future land use/cover change over Tordzie watershed in Ghana. *Frontiers in Environmental Science*. https://doi.org/10.3389/fenvs.2023.1139264

32. Winifred Ayinpogbilla Atiah, Robert Johnson, Francis Kamau Muthoni, Gizaw Tsidu Mengistu, **Leonard Kofitse Amekudzi**, Osei Kwabena, Fred Kizito (2023). Bias correction and spatial disaggregation of satellite-based data for the detection of rainfall seasonality indices. *Heliyon*. https://doi.org/10.1016/j.heliyon.2023.e17604

33. Prince Asilevi Junior, Felicia Dogbey, Patrick Boakye, Jeffrey Nii Armah Aryee, Edmund Ilimoan Yamba, Stephen Yaw Owusu, David Kofi Peprah, Emmanuel Quansah, Nana Ama Browne Klutse, John Kwesi Bentum, Kwaku Amaning Adjei, Geophrey Kwame Anornu, Sampson Oduro-Kwarteng, **Leonard Kofitse Amekudzi** (2023). Bias-corrected NASA data for aridity index estimation over tropical climates in Ghana, West Africa. *Journal of Hydrology Regional Studies*. https://doi.org/10.1016/j.ejrh.2023.101610

34. Edmund I. Yamba, Andreas H. Fink, Kingsley Badu, Ernest O. Asare, Adrian M. Tompkins, **Leonard K. Amekudzi** (2023). Climate Drivers of Malaria Transmission Seasonality and Their Relative Importance in Sub-Saharan Africa. *GeoHealth*. https://doi.org/10.1029/2022gh000698

35. Marian Amoakowaah Osei, Jeffrey N. A. Aryee, Jacob Agyekum, Jesse Ashong, Samuel Owusu Ansah,

Maureen Abla Ahiataku, Frank Baffour-Ata, **Leonard K. Amekudzi**, Winifred Ayinpogbilla Atiah, Michael Padi, Johnson Ameho, Bashiru Yahaya, Joseph Portuphy, Benjamin Lamptey (2023). Environment of severe storm formations over West Africa on the 26-28 June 2018. *Meteorological Applications*. https://doi.org/10.1002/met.2109

36. Steve Ampofo, Thompson Annor, Jeffrey N.A. Aryee, Jacob Agyekum, **Leonard K. Amekudzi** (2023). Gridded daily rainfall data for Ghana for the period 1960 - 2015: Approach and validation process. *Data in Brief*. https://doi.org/10.1016/j.dib.2023.109115

37. Steve Ampofo, Thompson Annor, Jeffrey N.A. Aryee, Winifred A. Atiah, **Leonard K. Amekudzi** (2023). Long-term spatio-temporal variability and change in rainfall over Ghana (1960–2015). *Scientific African*. https://doi.org/10.1016/j.sciaf.2023.e01588

38. Winifred Ayinpogbilla Atiah, **Leonard K. Amekudzi**, Sylvester K. Danuor (2023). Mesoscale convective systems and contributions to flood cases in Southern West Africa (SWA): A systematic review. *Weather and Climate Extremes*. https://doi.org/10.1016/j.wace.2023.100551

39. Edmund I. Yamba, Jeffrey N. A. Aryee, Emmanuel Quansah, Patrick Davies, Cosmos S. Wemegah, Marian A. Osei, Maureen A. Ahiataku, **Leonard K. Amekudzi** (2023). Revisiting the agro-climatic zones of Ghana: A re-classification in conformity with climate change and variability. *PLOS Climate*. https://doi.org/10.1371/journal.pclm.0000023

40. Jacob Agyekum, **Leonard K. Amekudzi**, Thorwald Stein, Jeffrey N. A. Aryee, Winifred Ayinpogbilla Atiah, Elijah Adesanya Adefisan, Sylvester K. Danuor (2023). Verification of satellite and model products against a dense rain gauge network for a severe flooding event in Kumasi, Ghana. *Meteorological Applications*. https://doi.org/10.1002/met.2150

41. Martin Kohler, Geoffrey Bessardon, Barbara Brooks, Norbert Kalthoff, Fabienne Lohou, Bianca Adler, Oluwagbemiga Olawale Jegede, Barbara Altstädter, **Leonard Kofitse Amekudzi**, Jeffrey Nii Armah Aryee and 30 others (2022). A meteorological dataset of the West African monsoon during the 2016 DACCIWA campaign. *Scientific Data*. https://doi.org/10.1038/s41597-022-01277-7

42. Mexoese Nyatuame, Sampson Kwaku Agodzo, **Leonard Kofitse Amekudzi** (2022). Analysis of rainfall and temperature trend and variability of the Tordzie Watershed. *Ghana Journal of Science Technology and Development*. https://doi.org/10.47881/271.967x

43. Enoch Bessah, William Amponsah, Samuel Owusu Ansah, Andrews Afrifa, Bashiru Yahaya, Cosmos Senyo Wemegah, Michael Tanu, **Leonard K. Amekudzi**, Wilson Agyei Agyare (2022). Climatic zoning of Ghana using selected meteorological variables for the period 1976–2018. *Meteorological Applications*. https://doi.org/10.1002/met.2049

44. Martin Addi, Yeboah Gyasi-Agyei, Emmanuel Obuobie, **Leonard Kofitse Amekudzi** (2022). Evaluation of imputation techniques for infilling missing daily rainfall records on river basins in Ghana. *Hydrological Sciences Journal*. https://doi.org/10.1080/02626667.2022.2030868

45. Jacob Agyekum, Thompson Annor, Emmanuel Quansah, Benjamin Lamptey, **Leonard Kofitse Amekudzi**, Benjamin Kofi Nyarko (2022). Extreme temperature indices over the Volta Basin: CMIP6 model evaluation. *Climate Dynamics*. https://doi.org/10.1007/s00382-022-06503-x

46. **Leonard K. Amekudzi or Leonard Amekudzi**, Yahuza Abdul Rahman, Mahawiya Sulemana, Paul Owusu Takyi (2022). Natural resource dependence and economic growth in SSA: are there threshold effects? *Development Studies Research*. https://doi.org/10.1080/21665095.2022.2112728

47. Patrick Davies, Roland Baatz, Heye Reemt Bogena, Emmanuel Quansah, **Leonard Kofitse Amekudzi** (2022). Optimal Temporal Filtering of the Cosmic-Ray Neutron Signal to Reduce Soil Moisture Uncertainty. *Sensors*. https://doi.org/10.3390/s22239143

48. Alain T. Tamoffo, Alessandro Dosio, **Leonard K. Amekudzi**, Torsten Weber (2022). Process-oriented evaluation of the West African Monsoon system in CORDEX-CORE regional climate models. *Climate Dynamics*. https://doi.org/10.1007/s00382-022-06502-y

49. **L Amekudzi** (2022). Rating Curve Development and Validation on Tordzie Watershed. *Hydrology*. https://doi.org/10.11648/j.hyd.20221003.11

50. Marian Amoakowaah Osei, Michael Padi, Bashiru Yahaya, Michael Baidu, Emmanuel Quansah, Jeffrey N. A. Aryee, Edmund I. Yamba, Samuel Owusu-Ansah, **Leonard K. Amekudzi** (2022). The dynamics of dry and wet monsoon MCS formation over West Africa: Case assessment of February 13, 2018 and June 18, 2018. *Quarterly Journal of the Royal Meteorological Society*. https://doi.org/10.1002/qj.4399

51. Marian Amoakowaah Osei, Craig R. Ferguson, Emmanuel Quansah, Michael Padi, **Leonard K. Amekudzi**, Sylvester Danuor (2022). West Africa's moist convective environment as observed by the Atmospheric InfraRed Sounder (AIRS). *International Journal of Climatology*. https://doi.org/10.1002/joc.7983

52. Kwabena Fosu-Amankwah, Geoffrey E.Q. Bessardon, Emmanuel Quansah, **Leonard K. Amekudzi**, Babara J. Brooks, Richard Damoah (2021). Assessment of aerosol burden over Ghana. *Scientific African*. https://doi.org/10.1016/j.sciaf.2021.e00971

53. **LK Amekudzi** (2021). Case Study Analysis of the Dynamics of West African Storms. *34th Conference on Hurricanes and Tropical Meteorology*. https://ams.confex.com/ams/34HURR/meetingapp.cgi/Paper/386551

54. Marian Amoakowaah Osei, **Leonard Kofitse Amekudzi**, Emmanuel Quansah (2021). Characterisation of wet and dry spells and associated atmospheric dynamics at the Pra River catchment of Ghana, West Africa. *Journal of Hydrology Regional Studies*. https://doi.org/10.1016/j.ejrh.2021.100801

55. Winifred A. Atiah, **Leonard K. Amekudzi**, Robert A. Akum, Emmanuel Quansah, Philip Antwi-Agyei, Sylvester K. Danuor (2021). Climate variability and impacts on maize (Zea mays) yield in Ghana, West Africa. *Quarterly Journal of the Royal Meteorological Society*. https://doi.org/10.1002/qj.4199

56. Marian Amoakowaah Osei, **Leonard Kofitse Amekudzi**, Akoto Yaw Omari-Sasu, Edmund Ilimoan Yamba, Emmanuel Quansah, Jeffrey N.A. Aryee, Kwasi Preko (2021). Estimation of the return periods of maxima rainfall and floods at the Pra River Catchment, Ghana, West Africa using the Gumbel extreme value theory. *Heliyon*. https://doi.org/10.1016/j.heliyon.2021.e06980

57. JNA Aryee, **LK Amekudzi**, J Agyekum (2021). Evaluating the Performance of NWCSAF for Enhanced Nowcasting in Ghana, West Africa. *34th Conference on Hurricanes and Tropical Meteorology*. https://ams.confex.com/ams/34HURR/meetingapp.cgi/Paper/386538

58. **Leonard K. Amekudzi or Leonard Amekudzi** (2021). Evaluation of Nowcasting Products: A Case Study of June 2018 Rainfall in Ghana, West Africa. *34th Conference on Hurricanes and Tropical Meteorology*. https://ams.confex.com/ams/34HURR/meetingapp.cgi/Paper/386565

59. Jeffrey N. A. Aryee, **Leonard K. Amekudzi**, Edmund I. Yamba (2021). Low-Level Cloud Development and Diurnal Cycle in Southern West Africa During the DACCIWA Field Campaign: Case Study of Kumasi Supersite, Ghana. *Journal of Geophysical Research Atmospheres*. https://doi.org/10.1029/2020jd034028

60. Alain T. Tamoffo, **Leonard K. Amekudzi**, Torsten Weber, Derbetini A. Vondou, Edmund I. Yamba, Daniela Jacob (2021). Mechanisms of Rainfall Biases in Two CORDEX-CORE Regional Climate Models at Rainfall Peaks over Central Equatorial Africa. *Journal of Climate*. https://doi.org/10.1175/jcli-d-21-0487.1

61. Nana Kofi Ahoi Appiah-Badu, Yaw Marfo Missah, **Leonard K. Amekudzi**, Najim Ussiph, Twum Frimpong, Emmanuel Ahene (2021). Rainfall Prediction Using Machine Learning Algorithms for the Various Ecological Zones of Ghana. *IEEE Access*. https://doi.org/10.1109/access.2021.3139312

62. **Leonard K. Amekudzi or Leonard Amekudzi**, Augustina Angelina Sylverken, Philip El-Duah, Godfred Acheampong, Mohammed Mutocheluh, Yaw Adu-Sarkodie (2021). Sero-epidemiology of human coronaviruses in three rural communities in Ghana. *Pan African Medical Journal*. https://doi.org/10.11604/pamj.2021.38.244.26110

63. Douglas J. Parker, Alan M. Blyth, Steven J. Woolnough, Andrew J. Dougill, Caroline L. Bain, Estelle de Coning, Mariane Diop-Kane, Andre Kamga Foamouhoue, Benjamin Lamptey, Ousmane Ndiaye, ... **Leonard K. Amekudzi** and 39 others (2021). The African SWIFT Project: Growing Science Capability to Bring about a Revolution in Weather Prediction. *Bulletin of the American Meteorological Society*. https://doi.org/10.1175/bams-d-20-0047.1

64. Winifred Ayinpogbilla Atiah, Francis K. Muthoni, Bekele Kotu, Fred Kizito, **Leonard K. Amekudzi** (2021). Trends of Rainfall Onset, Cessation, and Length of Growing Season in Northern Ghana: Comparing the Rain Gauge, Satellite, and Farmer's Perceptions. *Atmosphere*. https://doi.org/10.3390/atmos12121674

65. Danuor Sylvester, **LK Amekudzi**, JNA Aryee (2021). Verification of Satellite and Reanalysis Rainfall Estimates for a Severe Flood Against Dense Rain Gauge Monitoring Network in Ghana, West Africa. *34th Conference on Hurricanes and Tropical Meteorology*. https://ams.confex.com/ams/34HURR/meetingapp.cgi/Paper/386554

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