**A BRIEF INTRODUCTION OF PROF. LEONARD K. AMEKUDZI**

Leonard K. Amekudzi is a Full Professor of Atmospheric Physics and Climate Science and 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 the retrieval of 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 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 Modeling. He has worked extensively with different research clusters across the globe. Among the research-collaborated projects participated in 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) and currently Global Challenge Research Fund Africa Science for Weather Information and Forecasting Techniques (GCRF African SWIFT). He was a regular research fellow at The Abudus Salam International Centre for Theoretical Physics, Trieste, Italy.

He has trained over a dozen M.SC/MPhil and PhD students and participated in fundraising for research in local and international terrain. He has also served as an external examiner to the Postgraduate Programme in Universities in Ghana and other African countries. Besides, he serves as an advisory board member for local and international PhD programmes and a visiting professor to WASCAL-CCWR at the University of Abomey-Calavi (Benin), WASCAL-CCHH, FUT-Minna, Nigeria and a Professor for WASCAL Common Course in Atmospheric Science. He is a lead consultant for four different Climate and Environmental projects in Ghana, resource person for climate and related impact workshops, key speaker and facilitator of several climate change workshops in Ghana and other parts of Africa. He is a career guidance and counselling and science curriculum development expert. 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 60 publications in high-impact peer-reviewed journals and over 80 oral and poster presentations in international conferences, an entrepreneur, a farmer, and a practising Christian. He is married with three children (all boys).

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| **PERSONAL DETAILS** |

Name: Leonard K. Amekudzi

Date and Place of Birth: 19th July 1968; Keta

Nationality: Ghanaian

Marital Status: Married

Number of Children: Three (3)

Email Addresses: [leonard.amekudzi@gmail.com](mailto:leonard.amekudzi@gmail.com);

[lkamekudzi.cos@knust.edu.gh](mailto:lkamekudzi.cos@knust.edu.gh)

Telephone: + 233-20-1842237

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| **ACADEMIC DEGREES EARNED AND UNIVERSITIES ATTENDED WITH DATES** |

2002 -2005: **University of Bremen, Germany**

*PhD (Atmospheric Physics, Climate Science and Satellite Remote Sensing)* *– Nov., 2005 (Magna Cum Laude)*

PhD Thesis topic: Stratospheric O3, NO2, and NO3 number density profiles from SCIAMACHY lunar occultation spectroscopic measurements: Retrieval,

validation and interpretation

2001 – 2002: **University of Bremen, Germany**

*MSc Course work in Environmental Physics* *in preparation for*

*PhD Research work*

1998 – 2001: **University of Cape Coast, Ghana,**

*M.Phil. (Theoretical Physics) – August, 2001*

*MPhil Thesis topic: Calculation of Magnetic Hyperfine Constant Using*

*Density Functional Theory*

1992 – 1997: **University of Cape Coast, Ghana,**

*B.Sc.(Physics), Dip.Ed. – July, 1997 (Second Class Upper)*

Project Work Topic: Physio-Thermal Properties of some Local Building

Materials

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| **PRIMARY AND SECONDARY EDUCATION** |

1989 – 1991 St Thomas Aquinas Secondary School, Accra (A’level)

1983 – 1989 Awudome Secondary School, Tsito-Awudome (O’level)

1980 – 1983 L. A. E.P. Middle School, Ho-Kpodzi

1974 – 1979 R.C. Boys Primary Scholl, Ho-Bankoe

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| **FELLOWSHIPS HELD WITH DATES** |

1. Regular Associate Fellowship, The Abudus Salam International Center for Theoretical Physics (ICTP), Italy, 2011 – 2016
2. European Space Agency (ESA) ENVISAT PhD fellowship, 2002 – 2005
3. European Space Agency (ESA) ENVISAT Post Doctoral fellowship, 2006 – 2008

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| **MEMBERSHIP OF PROFESSIONAL BODIES/ASSOCIATIONS** |

1. **Member**, American Geophysical Union (AGU) – 2005 to date
2. **Member**, European Geophysical Union (EGU) – 2003 to date
3. **Member**, Ghana Science Association – 2008 to date
4. **Member**, Ghana Institute of Physics – 2008 to date
5. **Elected member**, Institute of Physics (IOP), London, U.K. – 2007 to date
6. **Associate member**, Committee on Advances in Space Research (COSPAR), 2003 to date.

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| **TEACHING & RESEARCH EXPERIENCE WITH DATES** |

2020 to date Full Professor in Atmospheric Physics and Climate Science

2015 – 2020 **Associate Professor**, in Atmospheric Physics and Climate Science

2009 – 2015 **Senior** **Lecturer** in Atmospheric Physics and Climate Science

2008 – 2009 **Lecturer**, Department of Physics, Kwame Nkrumah University of Science and

Technology, Kumasi, Ghana.

2006 – 2008 **Post-Doctoral/Senior Research Fellow**, Institute of Environmental Physics

and Remote Sensing (IUP/Ife), University of Bremen, Germany.

2002 – 2005 **Research Scientist**, Institute of Environmental Physics and Remote

Sensing (IUP/Ife), University of Bremen, Germany.

2000 – 2001 **Demonstrator**, Department of Physics, UCC, Ghana

1998 – 2001 **Physics Teacher**, and Science Resource Center personnel, Mfantsipim Senior High School, Cape Coast

1999 – 2001 **Resource person**, National Science and Maths Quiz, Mfantsipim School

1997 – 1998 **National Service Teaching Assistant**, UCC, Cape Coast

1997 – 1998 **Part-time Mathematics Teacher**, St Augustine Senior High School, Cape Coast

1995 – 1997 **Part-time Physics** Teacher, Keta Senior High School, Keta

1991 – 1992 Physics Teacher (National Service), Awudome Senior High School, Tsito

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| **MANAGERIAL AND OTHER PROFESSIONALLY EXPERIENCE** |

1. Provost, College of Science, KNUST (2019 to date)
2. Head, Department of Physics, KNUST (2018 - 2019)
3. Coordinator Meteorology and Climate Science Programme, KNUST, (2012 – 2018)
4. Chairman SWIFT International Summer School on Tropical Meteorology of East and West Africa (January 2019 – date)
5. Local Organizer and Resource Person, DACCIWA Stakeholder Meeting, Accra, October 2018.
6. Chairman, 8th KNUST Summer School Committee (January 2018 to December 2018)
7. Chairman. College of Science Laboratory Committee (2017 – 2019)
8. Local Advisory Board Member and visiting Professor, WASCAL Climate Change and Land Use (CCLU) graduate programming, KNUST (2011 to date)
9. International Advisory Board Member WASCAL-CCLU, Minna, Nigeria, 2015 to date
10. Lead Consultant, GIZ Project on Development and Implementation of Capacity Building Measures for Staff of NADMO on Climate Disaster Risk Management (May – June 2018)
11. Member, Specialized Committee of the Ghana National Commission for UNESCO (2017 to date)
12. Member, Industrial tracer and feedback Committee, 2017
13. Member, College of Science Proposal writing committee 2016 – date
14. Visiting Professor WASCAL-CCWR, University of Abomey-Calavi (Benin) and WASCAL-CCA, Bamako University (Mali),
15. Visiting Professor, WASCAL Common Courses in Atmospheric Science, March to July 2016
16. Member and Secretary, 3-man WASCAL committee that developed Master of Science in Climate Informatics Syllabus, June 2016
17. External Examiner and Moderator, Applied Physics Department, UDS, Navrongo Campus (2017 to date)
18. External examiner for MPhil and PhD, Institute of Environment and Sanitation, U.G., Ghana, 2012 to date
19. External examiner for MPhil, Department of Physics, UCC, Ghana, 2013 to date
20. External Examiner for PhD in Climate and Environmental Science, Environmental Science Department, Addis Ababa University, Ethiopia and the University of South Africa, Tshwane, South Africa. 2017 to date
21. Assistant examiner for Physics, WAEC (1998 – 2001 and 2008 - 2015)
22. Science Career Guidance Resource Person, since 2010 to date
23. Lead Consultant, UNDP project on Ghana Climate projection for Health Sector Response, June – November 2014
24. Chairman, Ewiem-Nimdie International summer school, held in the College of Science, KNUST, Ghana July 2010.
25. Reviewer of Climate and Environmental Science related Proposals for KRef and A.U.
26. Reviewer of Journal of Science and Technology (2009 to date)
27. Reviewer, Journal of the Ghana Science Association (2009 – date)
28. Committee Member, Policy on teaching and learning in KNUST (2012)
29. Steering Committee Members for Climate Change & Population Conference Africa held in Accra, Ghana from July 01-04, 2012.
30. Guest Climate Scientist, Regional Institute of Population Studies (RIPS), 2013 to 2016
31. Technical Working Group (TWG) Member, National Climate Change Early Warning (2013 to date)
32. Seminar Coordinator, University of Bremen, 2003 to 2005.
33. President, Physics Student Association of Ghana (PHYSAG)-UCC Branch, 1994 – 1996

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| **PROFESSIONAL ENHANCEMENT TRAINING WORKSHOPS ATTENDED** |

1. Workshop on Research Grant Proposal, Writing and Reviewing, BSU II, KNUST, Kumasi, July 23 – 25, 2019
2. Best Practices in Grant Financial Management, BSU II Project Training Workshop, KNUST, Kumasi, June 29 – 30, 2017
3. Good Practice in Academic Mentoring and Developing the Next Generation of Climate Change Researchers, CIRCLE Supervisors and Mentors Workshop, Nairobi, Kenya, May 16 – 20, 2017
4. Building Understanding of Climate Variability in Planning of Groundwater Supplies from Low Storage Aquifers in Africa, La-Palm Royal Beach Hotel, Accra, January 25, 2017
5. International Development Research Centre Workshop on Communicating Climate Adaptation Research for Impact and Influence in Africa, Pretoria, South Africa, September 22 – 26, 2014
6. French-German Summer School on Aerosols, heterogeneous Chemistry and Climate, Iled’Oleron, France, September 19 to October 01, 2004
7. Ministry of Education Science Resource Centre Training Programme, PRESEC-LEGON, August 30 – October 1, 1999.

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| **RESOURCE PERSON, KEYNOTE SPEAKER AND FACILITATOR OF WORKSHOPS** |

1. Plenary Speaker, 7th Space Science and Satellite Technology Application Conference on Advancing Developing Nations Space Activities Using Small Satellite Technology for Sustainable Development, ANU, Koridua, November 19 -20, 2018
2. Recourse Person/ and Facilitator, Climate Disaster Risk Management Trainer of Trainers’ workshop for NADMO, Noda Hotel, Kumasi, May 21 – 25, 2018
3. Keynote Speaker, 1st International Conference on Geography and Development, INCOGaD 2018, Climate Change and Sustainable Development, July 26, 2018
4. Consultant/Facilitator, USAID/UCC climate change and adaptation workshops Cape Coast 2016 and 2017,
5. Keynote Speaker, Symposium on Environment and Health, Climate Change in the Context of U.V. radiation, Pretoria, South Africa June 1 – 3, 2015
6. Plenary Speaker, Continental Conference on Enabling Informed Decision and Policy Making for Adaptation to Climate Change in Africa. Theme Providing Evidence and Fostering Research Policy Linkages to Support Adaptation to Climate Change in Africa, Nairobi, Kenya, March 10 – 12, 2015
7. Resource Person and Facilitator, CCARTCD Climate Change Modelling Short Course, RIPS, University of Ghana, Legon, February 11 -15, 2013 and April 8 – 12, 2013,
8. Resource Person and Facilitator, PhD course in Climate Change Processes, Mitigation and Adaptation, BSU I Common Course, KNUST, Kumasi, March 11 – 15, 2013
9. Resource Person, World Meteorological Organization (WMO) Day, Climate Change and Impact on Malaria Prevalence in Ghana, British Council Accra, April, 2011
10. Resource person, Public lecture (for The French Embassy climate change awareness week at the three leading universities (KNUST, UCC and U.G.). The lecture topic was *Climate change: Reality or a myth*, March 31 to April 2, 2009.

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| **Grants and Fund Won with Dates** |

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| **S/N** | Grants/Fund | Amount | Dates |
| 1 | WASCAL CONCERT | €137,000.00 | 2021 – 2025 |
|  | WASCAL FLURIFOOD | €130,500.00 | 2021 – 2025 |
| 1. | African Swift | £300,000.00 | 2018 – 2022 |
|  | SWIFT Summer School on Tropical Meteorology | £47,000.00 | 2019 |
| 2. | Equipment mobilization and atmospheric field measurement under DACCIWA | €2,000,000.00 | 2016 |
| 3. | DACCIWA Project including funding for 2 PhD students | €75,000.00 | 2014 – 2018 |
|  | WASCAL-CCLU | 2,800,000.00 | 2012 – Date |
| 4. | QWeCi Project | €200,000.00 | 2010 – 2014 |
| 5. | UNESCO and PhD student fund Meteorology and Climate Science Summer School 2010 | €46,000.00 | 2010 |
| 6. | WUS field Equipment | €40,000.00 | 2009 |
| 7. | EREDACS | £26,904.00 | 2017 |
| 8. | CCARTCD Project | $14,400.00 | 2013 |

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| **PARTICIPATION IN RESEARCH PROJECTS** |

**2017 to date African SWIFT** project (GCRF Africa Science for Weather Information and Forecasting Techniques)

**2015 to date CIRCLE** Project(Climate Impacts Research Capacity Leadership Enhancement)

**2014 to 2018 DACCIWA** Project: Dynamic-Aerosol-Chemistry-Cloud interactions in West

Africa

**2013 to 2015** CCARTCD Project: Climate Change Adaptation Research and Training

Capacity for Development, Climate modelling scientist.

**2011 to date** WASCAL Project: West African Climate change and Landuse (KNUST

local advisory board member, Visiting professor: Abomey-Calavi University,

Benin and Bamako University-UCC, Mali-Ghana, University of Lome, Togo)

**2010 – 2014** QWeCi Project:Project Climate and Remote Sensing Scientist

**2006 – 2008**  ESA Study SCILoV: Project Scientist in charge of limb validation

**2006 – 2008** BMBF-Project; Validation of measurement data of the SCIAMACHY

The instrument on ESA Satellite ENVISAT, Project Scientist/Postdoc

**2002 – 2005** BMBF-Project, ENVISAT Satellite Validation within HGF-network on

ENVISAT Atmospheric Measurements: Research Scientist

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| **DETAILS OF RESEARCH UNDERTAKEN** |

Key Research Areas: Atmospheric Physics and Chemistry, Meteorology and Climatology of the Tropics and Remote Sensing

1. Remote Sensing of Atmospheric Compositions (trace gases and aerosol particles retrievals)
2. Measurement and analysis of meteorological parameters for long term trend and climate impact studies
3. Atmospheric and Ocean Dynamics
4. Mathematical-biological Climate-Malaria Modelling
5. Hydro-climatic modelling and climate change disaster management
6. Land use and land cover changes studies
7. Earth’s climate system modelling for assessment of present and expected future changes
8. Boundary-Layer Meteorology, with emphasis on its evolution and processes.
9. Environmental pollution studies.

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| **VISIBILITY ON RESEARCH PORTALS** |

**GOOGLE SCHOLAR**

Citation 972

Citation since 2015 795

h-index 19

i10-index 26

**RESEARCHGATE**

RG Score 29.00

Research items 95

Reads 18,072

Citation 805

H-index 16

Projects 10

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| **STUDENTS PROJECT AND THESES SUPERVISED (2009 – 2021)** |

**UNDERGRADUATE PROJECTS: B.SC (PHYSICS AND METEOROLOGY AND CLIMATE SCIENCE)**

Total number of BSc projects supervised = 80

**POSTGRADUATE (MPHIL/MSC) THESES COMPLETELY SUPERVISED**

**SINCE 2010**

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| **S/N** | **NAME OF STUDENT** | **TOPIC OF THESIS AND INSTITUTION** | **YEAR** |
| 1 | Edmund Ilimoan Yamba | Investigation of seasonal and annual variability in rainfall pattern over the transition and northern savannah belts of Ghana, KNUST, Ghana | 2010 |
| 2 | Caleb Mensah | Investigation of the onset, cessation and length of the rainy season over Ghana, KNUST, Ghana | 2014 |
| 3 | Jeffrey Nii Armah Aryee | Development of high spatial resolution rainfall climatology for Ghana, KNUST, Ghana. | 2015 |
| 4 | Winifred Ayinpogbilla Atiah | Investigating the variability of wet and dry spells over the savannah zone of Ghana, AIMS, Senegal | 2015 |
| 5 | Michael Baidu | Intra-seasonal and inter-annual variability of rainfall in Ghana using wavelet analysis, KNUST, Ghana | 2016 |
| 6 | Marian Amoakowaah Osei | Hydro-climatic modeling of Owabi Catchment using the Soil-Water-Assessment-Tool (SWAT), KNUST, Ghana | 2017 |
| 7 | Emmanuella Serwa Gyawu | Assessment of the hydrological response of Owabi Catchment to land use/land cover change, KNUST, Ghana | 2017 |
| 8 | Samuel Kyei-Manuh | Assessment of mesoscale induced severe weather from thunderstorm frequency and derived stability indices, KNUST, Ghana | 2019 |
| 9 | Adam Lassana Keita | Assessment and Prediction of Drought Episodes During the Rainy Season and its impact on Maize Farming in Dioïla, Koulikoro Region, Mali | 2019 |
| 10 | Godfred Abbey Torsah | Dynamic and Thermodynamic Conditions for  Mesoscale Convective Systems (MCSs) Development in West Africa: Case Study of June, 2018 | 2020 |
| 11 | Patrick Davies | Variability of Surface Radiative Fluxes over  West Africa | 2021 |

**POSTGRADUATE (PhD) THESES SUPERVISED**

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| **S/N** | **NAME OF STUDENT** | **TOPIC OF THESIS** | **YEAR** |
| 1 | Nat Owusu Prempeh  *main- Supervisor* | Soil respiration across predominant land-used in Viea catchment in Sudan Savannah zone, North-East Ghana, WASCAL Climate Change and Land used PhD thesis, KNUST, Ghana | 2015 |
| 2 | Ernest Ohene Asare  *main- Supervisor* | Development and evaluation of temperature and surface hydrology schemes for dynamical vector-borne disease models, *Meteorology and Climate Science PhD thesis under the QWeCi project, Department of Physics, KNUST* | 2015 |
| 3 | Benewinde Jean-Bosco Zoungrana  *Main - Supervisor* | Vegetation cover response under rainfall variability and land-use change in the southwest of Burkina Faso. *WASCAL Climate Change and Land used PhD thesis, KNUST* | 2016 |
| 4 | Precious Agbeko Dzorgbe Mattah  *Co-supervisor* | Studies on the impact of Environment and Climate variabilities on Anopheles species population in Accra and Sekondi-Takoradi Metropolitan areas of Ghana. Institute of Environment and Sanitation *PhD thesis, University of Ghana, Legon* | 2016 |
| 5 | Akwasi Afrifa Acheampong  *Co-supervisor* | Retrieval of integrated water vapour from GNSS signal for Numerical Weather Precipitation. *Geomatic Engineering PhD thesis under BSU project, KNUST* | 2016 |
| 6 | Jeffery N.A. Aryee  *Main- supervisor* | Dynamics of the planetary boundary layer over West Africa: Assessment from AMMA and DACCIWA field observations. *DACCIWA project PhD, Department of Physics, KNUST* | 2018 |
| 7 | Winifred Ayinpogbilla Atiah  *Main- supervisor* | Performance assessment of satellite and DACCIWA optical gauge rainfall products and analysis of trends and drivers of rainfall extremes in Ghana. *DACCIWA project PhD, Department of Physics, KNUST* | 2018 |
| 8 | Mexoese Nyatuame  *Co-supervisor* | Impacts Climate and Land use/cover changes on Tordzie Watershed. *Agricultural and Biosystems Engineering PhD thesis*, *KNUST* | 2018 |
| 9 | Margaret Appiah  Co-supervisor | Malaria Transmission in Accra: Modeling the climatic and socio-demographic influence, RIPS Thesis, U.G., Legon | 2019 |
| 10 | Clement Nyamekye  Main Supervisor | Assessing impact of soil and water conservation measures on vegetation cover in Burkina Faso using MODIS NDVI data, WASCAL PhD thesis, KNUST | 2016 – 2019 |
| 11 | Frederick Wireko Manu  *Co- supervisor* | Assessing thermal comfort in a naturally ventilated residential building in the savannah climatic zone of Ghana. WASCAL Climate Change and Land used PhD thesis, KNUST | 2014 – 2019 |
| 12 | Marian Amoakowaah Osei  Main Supervisor | Impact of climate and land-use changes on the hydrology of the Pra catchment, SWIFT Project, Department of Physics, KNUST | 2017 to date |
| 13 | Steve Ampofo  Main supervisor | Climate change and variability and its impacts on sorghum and millet production in the Northern savannah agro-ecological zone, Ghana, Department of Physics, KNUST | 2016 to date |
| 14 | Kwabena Ofosu Amankwah  Main Supervisor | Assessment of urban aerosol burden and dynamics over selected cities in Ghana, partly funded by DACCIWA, Department of Physics, KNUST | 2015 to date |
| 15 | Samuel Kyei-Manuh  Main Supervisor | Water System Modeling and Optimization | 2019 to date |
| 16 | Martin Addi  Main Supervisor | Climate variability and change over Pra and Densu river basins | 2019 to date |
| 17 | Francisca Martey  Main supervisor | Improvement of Seasonal Forecasting for Agriculture management in the context of climate Change | 2019 to date |
| 18 | Ragatoa Saberma DAKÉGA  Main Supervisor | Drought-Heatwaves Dynamics Interactions with Land Use Land Cover Change under the West African Monsoon System | 2019 to date |

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| **SUBJECTS/COURSES TAUGHT** |

**UNDERGRADUATE COURSES**

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| **Course** | **Department** | | **Date** |
| **PHY 154**: Properties of Matter | Department of Physics, KNUST. | | 2008 – 2009 |
| **PHY 453**: Statistical Mechanics | Department of Physics, KNUST. | | 2008 – 2011 |
| MET 253: Programming with FORTRAN I | Department of Physics, KNUST. | | 2009 – 2015 |
| MET 254: Programming with FORTRAN II | Department of Physics, KNUST | | 2010 – 2016 |
| **MET 353**: Satellite and Radar Meteorology I | Department of Physics, KNUST. | | 2010 – date |
| **MET 354**: Satellite and Radar Meteorology II  **MET 355**: Atmospheric and Ocean Dynamics | Department of Physics, KNUST.  Department of Physics, KNUST. | | 2011 – date  2013 – 2015 |
| MET 357 Atmospheric Physics I | Department Physics, KNUST. | | 2013 – 2015 |
| **MET 358:** Atmospheric Physics II | Department of Physics, KNUST. | | 2012 – 2015 |
| **MET 359:** Atmospheric Science Field Work  AERO 456: Applied Meteorology | Department of Physics, KNUST  Department of Mechanical Engineering, KNUST | | 2010 – 2017  2010 – 2016 |
| **MET 459**: Tropical Climatology | Department of Physics, KNUST | | 2010 – 2013, 2016 -2018 |
| **MET 462**: Biometeorology and Human Health | Department of Physics, KNUST. | | 2014 – 2016 |
| MET 452 Prediction of Tropical Weather System | Department Physics, KNUST. | | 2016 – 2017 |
| **POSTGRADUATE COURSES** | | | |
| **Course** | **Department** | **Date** | |
| **PHY 553:** Topics in classical and Quantum Mechanics | Department of Physics, KNUST. | | 2008 – 2010 |
| **PHY 555:** Theory of Fields | Department of Physics, KNUST. | | 2008 –2010 |
| **PHY554:** Topics in Advanced Quantum Mechanics | Department of Physics, KNUST. | | 2008 – 2010 |
| **MET 561**: *Advanced Atmospheric Dynamics I* | Department of Physics, KNUST | | 2013 – date |
| **MET 545**: Atmospheric Physics | Department of Physics, KNUST | | 2013 – date |
| **MET 551:** Climate System in Sub-Saharan Africa | Department of Physics, KNUST | | 2016 – date |
| **PHY545:** Topics in Advanced Programming I | Department of Physics, KNUST | | 2011 – 2014 |
| **MET 568:** Atmospheric Dynamics II | Department of Physics, KNUST | | 2013 – date |
| **MET 548:** Aeronomy of Upper Atmosphere | Department of Physics, KNUST | | 2013 -2015 |
| Advanced Programming II | Department of Physics, KNUST | | 2014 – 2016 |
| **PHY562:** Topics in Classical and Quantum Mechanics | Department of Physics, KNUST | | 2012 – 2014 |
| **MET564: Climate Change and Modelling** | Department of Physics, KNUST | | 2013 – 2016 |
| **MET546:** Remote Sensing of the Atmosphere | Department of Physics, KNUST | | 2013 – date |

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| **JOURNALS, BOOK CHAPTERS AND BOOK PUBLICATIONS** |

1. M. A. Osei , L. K. Amekudzi, and E 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 34 (2021) 100801
2. Atiah W. A., G. Mengistu Tsidu **and L. K. Amekudzi** (2020) Investigating the merits of gauge and satellite rainfall data at local scales in Ghana, West Africa, Weather and Climate Extremes, 100292
3. Nyatuame M., **L. K. Amekudzi**, and S. K. Agodzo (2020) Assessing the land use/land cover and climate change impact on water balance on Tordzie watershed, J. Remote Sens App Society and Environment, 20(2020), 100381, doi.org/10.1016/j.rsase.2020.100381
4. Osei M.A., **L. K. Amekudzi**, C. R. Ferguson, and S. K. Danuor (2020) Inter-Comparison of AIRS Temperature and Relative Humidity Proﬁles with AMMA and DACCIWA Radiosonde Observations over West Africa, Remote Sens., 12, 2631;

doi:10.3390/rs12162631

1. Nyamekye C., Schönbrodt-Stitt S., **Amekudzi L.K**., Zoungrana B.J-B., and Thiel M. (2020) Usage of MODIS NDVI to evaluate the effect of soil and water conservation measures on vegetation in Burkina Faso. Land Degrad Dev. 2020;1–13. <https://doi.org/10.1002/ldr.3654>.
2. Wemegah C.S., E.I. Yamba, J.N.A. Aryee, F. Sam, and **L.K. Amekudzi** (2020) Assessment of Urban Heat Island Warming in the Greater Accra Region, Scientiﬁc African, DIO: 10.1016/j.sciaf.2020.e00426
3. Atiah W. A., **L. K. Amekudzi**, Aryee J. N. A, K. Preko and S. K. Danuor (2020) Validation of Satellite and Merged rainfall data over Ghana, West Africa, MDPI Atmosphere, 11, 859; doi:10.3390/atmos11080859
4. Atiah W. A., G. Mengistu Tsidu**, L. K. Amekudzi**, and C. Yorke (2020) Trends and Interannual variability of extreme rainfall indices over Ghana, West Africa, Journal of Theoretical and Applied Climatology, DIO:10.1007/s00704-020-03114-6
5. Maranan M., A. H. Fink, P. Knippertz, **L.K. Amekudzi** W. A. Atiah and M. Stengel (2020) A process-based validation of GPM IMERG and its sources using a mesoscale rain gauge network in the West African forest zone, Journal of Hydrometeorology, DIO:10.1175/JHM-D-19-0257.1
6. Yamba E. I., A. M. Tompkins, A. H. Fink, V. Ermert, M.D. Amelie, **L. K. Amekudzi** and O. J. T. Briët (2020), Monthly Entomological Inoculation Rate data for studying the seasonality of malaria transmission in Africa, MDPI Data,

DIO:10.1594/PANGAEA.892682

1. Aryee J. N. A, **L.K. Amekudzi**, K. Preko, W. A. Atiah, and S. K. Danuor, (2019) Estimation of planetary boundary layer height from radiosonde profiles over West Africa during the AMMA field campaign: Intercomparison of different methods, Scientific Africa 7, DIO: 10.1016/j.sciaf. 2019.e00228
2. Osei M. A., **L. K. Amekudzi**, D. D. Wemegah, K. Preko, E. S. Gyawu and K. Obiri-Danso, (2019), The impact of climate and land-use changes on the hydrological processes of Owabi catchment from SWAT analysis, Journal of Hydrology: Regional Studies, 25, DIO: 10.1016/j.ejrh.2019.100620
3. Asilevi P. J, E. Quansah, **L. K.** **Amekudzi**, T. Annor, N. A. Browne Klutse, (2019), Modeling the spatial distribution of Global Solar Radiation (GSR) over Ghana using the Angstrom-Prescott sunshine duration model, Scientific Africa, 4 (2019) e00094.
4. Atiah, W.A., **Amekudzi, L.K.**, Quansah, E. and Preko, K. (2019) The Spatio-Temporal Variability of Rainfall over the Agro-Ecological Zones of Ghana. Atmospheric and Climate Sciences, 9, 527-544.
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