Curriculum Vitae
Naomi Kumi

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Nationality: Ghanaian

Professional Profile

I am a Climate Scientist, Meteorologist, and Senior Lecturer. I specialize in atmospheric and climate science, with research interests in climate change, heat stress, seasonal climate prediction, and the impacts of global warming on vulnerable communities. My work combines research, teaching, and community engagement to support evidence-based climate solutions and sustainable development. I particularly enjoy collaborating with other scientists to develop new skills and solve new challenges.

Career Summary

2021 – Date UNIVERSITY OF ENERGY AND NATURAL RESOURCES (UENR), SUNYANI

March 2025 – Senior Lecturer, Department of Atmospheric and Climate Science

August 2025 –
- Seminar and Projects Coordinator

April 2025 –
- Vice Dean of Students

2021 – 2025 Lecturer

August 2024 – April 2025
- Examinations Officer, School of Geosciences.

August 2023 – July 2025
- Departmental Industrial Attachment Coordinator.
- Departmental Internship Officer.
- Undergraduate Studies Coordinator for the Department.

March 2021- July 2023
- Department Examinations Officer.
- Graduate Studies Coordinator for the Department.
- Academic Counsellor.
- Departmental Representative on School and Academic Board.
- Founder, Association for Women in Climate Science (AWiCS), UENR.

2009 - 2021 GHANA METEOROLOGICAL AGENCY (GMet)

2020 – 2021 Principal Meteorologist
- Research on the state of Ghana's climate under climate change scenarios.
- Air quality modelling in Ghana.
- Preparation of seasonal forecasts and monthly bulletins.

2019 - 2021 Head of Climatological Unit
- Preparation of seasonal forecasts and monthly bulletins.
- Supervision and coordination of subordinates.
- Team Lead, GMet Weather Information Dissemination System (WIDS) Project.

2017 - 2019 Senior Meteorologist

- Researching on how to improve the existing seasonal forecasting methods.

2012 - 2017 Meteorologist
- Preparation of timely seasonal forecasts for the public and for managerial decision making.
- Responsible for the provision of early warning of severe weather (flood/drought) events.
- Teaches Physics at the Agency's training school.

2009 - 2012 Assistant Meteorologist
- Analysis of meteorological data.
- Preparation and compilation of annual rainfall values.
- Preparation of daily weather forecast for the public and aviation purposes.
- Researching on rainfall patterns in the country (Ghana).

Education and Qualifications

- **Post-doctoral Research Fellow,** February 2024 – January 2027, University of Cape Town, Cape Town, South Africa. **Research Topic:** *Impact of Solar Radiation Management (SRM) on Rainfall Onset and Cessation Dates over West Africa.*
- **PhD in Meteorology and Climate Science (West African Climate System),** June 2016 - September 2019, WASCAL, Federal University of Technology, Akure, Ondo State, Nigeria. **Thesis:** *Improving Seasonal Rainfall Prediction over West Africa using Dynamic Climate Models.*
- **MSc. Meteorology,** 2010 - 2012, Nanjing University of Information Science and Technology Nanjing, China. **Thesis:** *Rainfall Variability and its Impact on Maize Production.*
- **B.Ed Science (Physics and Mathematics option),** 2002 - 2006, University of Cape Coast, Cape Coast, Ghana. **Thesis:** *Sex Differences in Science Achievement at the Basic Education Level.*

Fellowship/Awards

- AIMS NEI Fellowship Program for Women in Climate Change Science, 2020 – 2021.
- Graduate Research Fellowship of the West African Science Service Centre on Climate Change and Adapted Land use (WASCAL), 2016 - 2019.
- The WMO Education and Training Fellowships programme, 2010 - 2012.

Membership of Professional Associations

- Forum for African Women Educationists (FAWE Ghana), Member.
- South African Society for Atmospheric Sciences (SASAS), Member.
- Ghana Science Association (GSA), Regular Member.
- Ghana Meteorological Society (GhMS), Interim Executive Member.
- AIMS NEI Women in Climate Change Science (WiCCS).

Research Experience

- Good with scientific programming on UNIX/Linux using a high-level language (e.g. Fortran, Matlab, basic Python).
- Experience in working with dynamic climate models (e.g., WRF) and modification of their source codes to suit regional climates.
- Skilful in handling and analysing large climate data (in netcdf and grib form).
- Experience with statistical methods and/or software for meteorological data analysis and visualization (e.g., Ferret, GrADS, R-Instat, Climate Predictability Tool (CPT), Instat Plus, R, DSSAT).
- Ability to communicate scientific research through conference presentations, formal publications and technical documents.

Other Skills

- **Languages:** Fluent in English, speaks and understand basic Chinese and French.
- **IT proficiency:** Word, Excel, PowerPoint, Internet, Email, WRF, RegCM, DSSAT, CDO, NCO, QGIS, NCL, Surfer, Statistica, and Origin.
- Reviewer of some international peer-reviewed journals.
- Reviewer and developer of some national policy documents on climate change in Ghana.
- Ability to work independently with or without supervision.
- Efficient, organized, reliable, fast-learner, highly motivated, team player, gets the job done.

Selected Professional Training and Scientific Visits

- Visiting student, Climate System Analysis Group, University of Cape Town, March 2017- December 2018, Cape Town, South Africa.
- Visiting Scientist, Climate Prediction Center/NOAA African Desk Program, June 1- September 28, 2013, College Park, University of Maryland, USA.

National and International Committees Served

- Member, Audit Committee, Berekum College of Education, December 2025 - date
- Member, Berekum College of Education Council, November 2025 - date
- Member, Ghana MAB (Man and Biosphere) National Committee, September 2022 - date
- Ghana's former Representative to the WMO Commission of Climatology.
- AIMS Next Einstein Forum Global Gathering (NEF-GG 2020) program committee.
- Ghana Expert Panel on the Health and Wellbeing impacts of Climate Adaptation Strategies.
- Ghana's Nationally Determined Contributions (NDCs) Gender Working Group.
- UENR Information Technology Committee.
- Chairperson, Committee for the Development of Academic Programmes in Applied Meteorology and Climate Science (Diploma, BSc, MSc, MPhil, PhD).
- Member, Committee for the Development of Academic Programmes in Applied Geomatics (Diploma, BSc, MSc, MPhil, PhD).

Publications

- **Kumi, N.,** Mensah, C., Quagraine, K. A., Patel, T. D., Otu-Larbi, F., Prempeh, N. A., ... & Odoulami, R. C. (2025). Africa's regional and local climate response to stratospheric aerosol injection characteristics. Frontiers in Climate, 7, 1599405.
- Kwakye, J., **Kumi, N.,** Prempeh, N. A., & Mensah, C. (2025). Climate variability and agricultural productivity: A time-series regression analysis of cassava, yam, and maize yields in Wenchi, Ghana. European Journal of Sustainable Development Research, 9(4).
- Yahaya M, Mensah C, Addaney M, Damoah-Afari P, **Kumi N**. Climate change and adaptation strategies in rural Ghana: a study on smallholder farmers in the Mamprugu-Moaduri district. International Journal of Climate Change Strategies and Management. **2023** Nov 28. DOI 10.1108/IJCCSM-08-2022-0110
- Abena Kyerewaa Morrison, Nana Agyemang Prempeh, Frederick Otu-Larbi, **Naomi Kumi**, Jeff Dacosta Osei, Enhancing Climate Information Services for Sustainable Development Needs and Decision -Making in an Academic Community in Ghana. *Journal of Environmental Impact and Management Policy* **2023**, 3 (3), 41-55. DOI: https://doi.org/10.55529/jeimp.33.41.55
- Andrew Manoba Limantol, Isaac Larbi, Sam-Quarcoo Dotse, Gloria Chinwendu Okafor, Peter Asare-Nuamah, Louis Kusi Frimpong, Abdul-Rauf Malimanga Alhassan, Emmanuel Angmor, Jilly Philippa Joel Premkumar, George Lutterodt, Theodora Akweley Asiamah, Thomas Atta-Darkwa, **Naomi Kumi** and Nana Agyemang Prempeh, An increase in temperature under the shared socioeconomic scenarios in the Volta River Basin, West Africa: implications for economic development, *Journal of Water and Climate Change,* **2023**, 14 (8), 2080-2824, DOI: 10.2166/wcc.2023.141
- **Kumi, N.,** Adeliyi, T. E., Asante, V. A., Abiodun, B., & Lamptey, B. (2023). Impact of Rainfall Onset Date on Crops Yield in Ghana. Frontiers in Sustainable Food Systems, 7, 283.
- Okrah, A., Prempeh, N.A., Mensah, C., John-son, R., **Kumi, N.,** Otu-Larbi, F., & yere-Boateng, R. (2023). Impact of Spatio-Temporal Land Cover Changes on Land Surface Temperature over Dormaa from 1990-2020. North American Academic Research, 6(4) 87-104. https://doi.org/10.5281/zenodo.7838837
- Mkuhlani, S., Zinyengere, N., **Kumi, N.,** & Crespo, O. (2022). Lessons from integrated seasonal forecast-crop modelling in Africa: A systematic review. Open Life Sciences, 17: 1398-1417. https://doi.org/10.1515/biol-2022-0507
- Yahaya, M., Damoah-Afari, P., Mensah, C., **Kumi, N.,** Prempeh, N. A., & Anima, P. A. (2022). Climate change adaptation strategies of smallholder farmers in the Mamprugu-moaduri district of Ghana. *Journal of Energy and Natural Resource Management*, 8(1), 86-94. https://doi.org/10.26796/jenrm.v8i1.196
- **Kumi, N.**, Abiodun, B. J., & Adefisan, E. A. (2020). Performance Evaluation of a Sub-seasonal to Seasonal Model in Predicting Rainfall Onset over West Africa. *Earth and Space Science*, e2019EA000928-T. https://doi.org/10.1029/2019EA000928
- **Kumi, N.**, & Abiodun, B. J. (2018). Potential impacts of 1.5° C and 2° C global warming on rainfall onset, cessation and length of rainy season in West Africa. *Environmental Research Letters*, 13(5), 055009. https://doi.org/10.1088/1748-9326/aab89e

Conferences, Workshops and Seminars

- The Nansen-Tutu Centre 15-Year Anniversary Symposium, 19 - 20 November 2025, Lord Charles Hotel Somerset West, Cape Town, South Africa.
- The South African Society for Atmospheric Sciences (SASAS) Conference, 13 - 14 November 2025, Breakwater Lodge, Cape Town, South Africa.
- Sensitization and Training workshop on the Africa Agriculture Adaptation Atlas Tool, 9 – 11

July 2025, Hephzibah Christian Limited, Aburi, Ghana.

- Scoping Meeting for the IPCC Seventh Assessment Report (AR7), 9 - 13 December 2024, DoubleTree by Hilton Kuala Lumpur, in Kuala Lumpur, Malaysia.
- Africa Experts Pre-Scoping Meeting, 30th November to 2nd December 2024, Libreville, Gabon.
- LIBSENSE Research Data Management workshop, 29-30 January 2024, Vice Chancellors Ghana Conference Auditorium, Accra.
- Conference for the commencement of the A Pan-African and Transdisciplinary Lens in the Margins: Tackling the Risks of Extreme Events (PALM-TREEs) project, 13-17 November 2023, Department of Environmental and Geographical Science, University of Cape Town, Cape Town, South Africa.
- Climate change and resilient development in Africa: unlocking the potential of climate research for climate services in Africa, 12-16 June 2023, Kigali – Rwanda.
- Mainstreaming CSA and CIS into universities' curricula: training West Africa universities lecturers on four thematic draft modules, 13-15 September 2023, KNUST, Kumasi – Ghana.
- WACREN Conference, 13-17 March 2023, Accra.
- WASCAL 10th Anniversary Conference, 29-30 November 2022, KNUST, Kumasi-Ghana.
- National Climate Change Seminar, 8-9 November 2022, Accra.
- GEO WEEK 2022, 31 October – 4 November 2022, Accra-Ghana.
- UN/Ghana on Space Technologies for Water Resources Management, 10 -13 May 2022, Accra.
- Innovative Teaching Practices in Higher Education, 10 – 12 January 2022, Sunyani, Ghana.
- Research School on Climate Science, 10 – 20 February 2020, Kigali, AIMS Rwanda.
- International Climate Change & Population Conference on Africa, 12 - 14 November 2019, Accra, Ghana.
- African Climate Risks Conference, 7 - 9 October 2019, Addis Ababa, Ethiopia.
- Stakeholder Workshop on National Framework for Climate Services in Ghana, 10 - 12 July 2019, Accra, Ghana.
- School on Climate and Environmental Modelling in the West African Region, 11 - 15 March 2019, Abidjan, Cote d'Ivoire.
- The 4th IMPALA Science Meeting, 14 - 15 January 2019, Met office, Exeter, United Kingdom.
- The Second International Conference on Subseasonal to Decadal Prediction, 17 - 21 September 2018, UCAR/NCAR, Boulder, Colorado, USA.

References

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