

Boniface Opoku Fosu
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Education

Ph.D. Climate Science Utah State University Dissertation: Towards the Prediction of Climate Extremes with Attribution Analysis Through Climate Diagnostics and Modeling Advisor: Dr. Shih-Yu Wang	2018 Logan Utah
MSc Climate Science Utah State University Thesis: Bay of Bengal: Coupling of Pre-monsoon Tropical Cyclones with the Monsoon Onset in Myanmar Advisor: Dr. Shih-Yu Wang	2014 Logan, Utah
BSc Meteorology and Climate Science Kwame Nkrumah University of Science and Technology	2011 Kumasi, Ghana

Research Interests

Climate variability, predictability and change
Interactions between weather and climate
Tropical-extratropical teleconnections
Air-sea interactions

Employment

Postdoctoral Fellow , EAS - Georgia Institute of Technology	2018 –
Research Assistant , Utah State University Duties: help with specific research assignments and agenda	2012 – 2018
Intern Meteorologist , Ghana Meteorological Agency (Kumasi Airport) Duties: providing weather information to flight dispatchers and pilots	2011 – 2012
Student Intern , Ghana Meteorological Agency Duties: daily weather observations and data analysis	2010

Teaching Experience

Teaching Assistant , Utah State University Duties: teaching classes, giving quizzes, preparing course materials, grading assignments, and working with students on problems. Courses:	2015 – 2018
PSC 6900 Climate Data Analysis	2015
PSC/WATS 3820 Climate Change	2016
PSC 4810 Climate and Climate Change	2016 – 2018

Awards and Scholarships

Doctoral Student Researcher of the year College of Agriculture and Applied Sciences, Utah State University	2017
Graduate Student Researcher of the year Department of Plants, Soils and Climate, Utah State University	2016
Robert N. Love Scholarship Award College of Agriculture and Applied Sciences, Utah State University	2015
Robert N. Love Scholarship Award College of Agriculture and Applied Sciences, Utah State University	2013
Winner UNICEF National Book Writing Competition, Ghana Book title: The Necessity of Educating the Girl Child link	2003

Travel Awards and Grants

National Oceanic and Atmospheric Administration Travel Grant 42nd Climate Diagnostics & Prediction Workshop, Norman, Oklahoma	2017
United States Geological Survey Travel Support Pacific Climate Workshop, Pacific Grove, California	2017
National Science Foundation Early Career Scientist Travel Grant CLIVAR Open Science Conference, Qingdao, China	2016
National Center for Atmospheric Research Travel Support Community Earth System Model Tutorials, Boulder, Colorado	2016
National Oceanic and Atmospheric Administration Travel Grant 40th Climate Diagnostics & Prediction Workshop, Denver, Colorado	2015
National Science Foundation Support Grant The World Weather Open Science Conference, Montreal, Canada	2014
National Oceanic and Atmospheric Administration Travel Grant 38th Climate Diagnostics & Prediction Workshop, College Park, Maryland	2013

Publications

Manuscripts in preparation

[9] Fosu, B. O., and S.-Y. Wang, 2018. Understanding long-lead ENSO predictions within the frame-work of recent ENSO events. Article manuscript in progress

Peer-Reviewed Publications

[8] Fosu, B. O., S.-Y. Wang, Kathleen Pegion, 2018. Synoptic and Climate Attributions of the December 2015 Extreme Flood in Missouri, USA. Water. doi:10.3390/w10040350 [link](#)

- [7] **Fosu, B. O.**, S.-Y. Wang, Sheng-Hsiang Wang, and Robert R. Gillies, 2017. Greenhouse Gases Stabilizing Winter Atmosphere in the Indo-Gangetic Plains May Increase Aerosol Loading. *Atmospheric Science Letters*. doi:10.1002/asl.739 [link](#)
- [6] **Fosu, B. O.**, S.-Y. Wang, Jin-Ho Yoon, 2016. The 2014/15 Snowpack Drought in Washington State and its Climate Forcing. *Bulletin of the American Meteorological Society*. doi:10.1175/BAMS-D-16-0154.1 [link](#)
- [5] Wang, S.-Y., **B. Fosu**, R. R. Gillies, and P. M. Singh, 2015. The Deadly Himalayan Snowstorm of October 2014: Synoptic Conditions and Associated Trends. *Bulletin of the American Meteorological Society*. doi:10.1175/BAMS-D-15-00113.1 [link](#)
- [4] **Fosu, B. O.**, and S.-Y. Wang, 2014. Bay of Bengal: Coupling of pre-monsoon tropical cyclones with the monsoon onset in Myanmar. *Climate Dynamics*. doi:10.1007/s00382-014-2289-z [link](#)
- [3] Wang, S.-Y., X. Jiang, and **B. Fosu**, 2014. Global eastward propagation signals associated with the 4-5-year ENSO cycle. *Climate Dynamics*. doi: 10.1007/s00382-014-2422-z [link](#)
- [2] Wang, S.-Y., B. Buckley, J.-H. Yoon and **B. Fosu**, 2013. Intensification of pre-monsoon tropical cyclones in the Bay of Bengal and its impacts on Myanmar. *Journal of Geophysical Research*. doi:10.1002/jgrd.50396 [link](#)

Conference Papers

- [1] **Fosu, B. O.**, and Simon S.-Y. Wang, 2014. Coupling of Bay of Bengal Tropical Cyclones with the Myanmar Monsoon Onset. *NOAA's Climate Prediction S & T Digest*. [link](#)

Professional Development

CLIVAR Open Science Conference Early Career Scientist Workshop Qingdao, China	2016
Community Earth System Model Tutorials NCAR Mesa Lab, USA	2016
The World Weather Open Science Conference Early Career Scientist Workshop Montreal, Canada	2014
Intensive Practical Training in Weather Forecasting KNUST, Ghana	2011
Ewim Nimdee Summer School in Tropical Meteorology and Climate KNUST, Ghana	2008

Presentations

International Meetings

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| CLIVAR Open Science Conference, Qingdao, China | 2016 |
| [1] Explaining the widespread Extreme Events of December 2015 (poster) | |
| [2] Greenhouse Gases Stabilizing Winter Atmosphere in the Indo-Gangetic Plains May Increase Aerosol Loading (poster) | |

The World Weather Open Science Conference. Montreal, Canada 2014
Bay of Bengal: The Coupling of pre-monsoon tropical Cyclones with the monsoon onset in Myanmar (**poster**)

National Meetings

98th American Meteorological Society Annual Meeting. Austin, Texas 2018
Long-lead ENSO Predictions in the Framework of Recent ENSO Events (**poster**)

SERDP & ESTCP Symposium. Washington DC 2017
Useful Prediction of Climate Extreme Risk for Texas-Oklahoma at 4-6 Years (**poster**)

The National Diversity in STEM Conference. Salt Lake City, Utah 2017
Understanding Snowpack Drought and Its Climate Forcing (**talk**)

42nd Climate Diagnostics & Prediction Workshop. Norman, Oklahoma 2017
[1] Understanding Long-lead ENSO Predictions within the Framework of Recent ENSO Events (**poster**)
[2] The Snowpack Drought in Washington State and its Climate Forcing (**poster**)

Pacific Climate Workshop, Pacific Groove, California 2017
The Snowpack Drought in Washington State and its Climate Forcing (**talk**)

AGU Fall Meeting. San Francisco, California 2015
Texas Floods, El Nino, and Climate Change (**poster**)

40th Climate Diagnostics & Prediction Workshop. Denver, Colorado 2015
Extended Inversions and worsening winter smog in the Indo-Gangetic Plains (**poster**)

Pacific Climate Workshop. Pacific Groove, California 2015
Fire and Ice: California Drought and "Polar Vortex" in a Changing Climate (**talk**)

95th AMS Annual Meeting. Phoenix, Arizona 2015
[1] Bay of Bengal: The Coupling of pre-monsoon tropical Cyclones with the monsoon onset in Myanmar (**poster**)
[2] Intensification of pre-monsoon tropical cyclones in the Bay of Bengal (**poster**)

National Weather Association 39th Meeting. Salt Lake City, Utah 2014
Precipitation in the Intermountain West: The ENSO-PDO Teleconnection (**talk**)

38th Climate Diagnostics & Prediction Workshop. College Park, Maryland 2013
Bengal Cyclones and the Myanmar Monsoon Onset in a Changing Climate (**talk**)

Regional Meetings

2014 Spring Runoff Conference. Logan, Utah 2014
Precipitation in the Intermountain West: The ENSO-PDO Teleconnection (**talk**)

University Seminars

Department of Plants, Soils, and Climate – Utah State University 2017
Greenhouse Gases Worsening Winter Inversions and air Quality in Basin Terrain: A Case Study in the IndoGangetic Plains

Department of Plants, Soils, and Climate – Utah State University The Deadly Himalayan Snowstorm of October 2014: Synoptic Conditions and Associated Trends	2015
Department of Plants, Soils, and Climate – Utah State University Precipitation in the Intermountain West: The ENSO-PDO Teleconnection	2014
Department of Plants, Soils, and Climate – Utah State University Bay of Bengal Cyclones and the Myanmar Monsoon Onset in a Changing Climate	2013

Technical Strengths

Data Visualization and Coding: GrADS, SAS, Fortran, Python, CDO
 Operating Systems: Linus/UNIX, MAC OS, Windows
 Numerical Models: CESM, WRF

Service and Affiliation

American Meteorological Society: Member
 Utah Climate Center: Research, data collection, and weather observations since 2012
 Reviewer for Climate Dynamics, Journal of Climate, Journal of Geophysical Research

Media Coverage

USU weather station recognized for 50 years of service. Herald Journal – Sep 12, 2017. [link](#)
 USU: Climate change can play role in poor air quality. Herald Journal – Mar 1, 2017. [link](#)
 Researchers' Work in National Report on Extreme Weather. Utah State Today – Dec 14, 2016. [link](#)
 125 Year Honored Institution Awards. The National Cooperative Observer, p5. Summer 2016. [link](#)