Chibueze N. Oguejiofor, Ph.D (In View).

oguejiofor.n.chibueze@gmail.com linkedin.com/chibueze-oguejiofor
https://chibueze-oguejiofor.github.io/

Education

2020 - Present — **Ph.D., University of Notre Dame, United States** in Civil & Environmental Engineering.
Thesis: On The Role of Submesoscale and Turbulent Processes in Tropical Cyclone Intensity Changes.
Expertise: Turbulence modeling, Air-Sea Interaction & Hurricane rapid intensification.

2019 - 2020 — **Pre-PhD., Int'l. Center for Theoretical Physics (ICTP), Italy** in Physics (Earth Systems).

2018 - 2019 — **M.Sc., African Inst. for Mathematical Sciences (AIMS), Rwanda** in Mathematical Sciences.

2012 - 2017 — **B.Sc., University of Lagos, Nigeria** in Geophysics (GPA: 4.74/5.0; Top 1%)

Employment History

Aug 2022 - Jan 2023 — **National Center for Atmospheric Research (NCAR)** - *Advanced Graduate Visitor, ASP* - Investigated the role of turbulence in the inner eyewall of intense hurricanes.

Sept 2018 - Sept 2019 — **Indicina Inc.** - *Data Engineer* - Built and optimized credit risk machine learning (ML) models.

Feb 2018 - Aug 2018 — **KPMG** - *Datascience Intern* - Built and deployed a machine learning (ML) churn model as an API.

Nov 2017 - Jan 2018 — **Carbon Inc.** - *Datascience Intern* - Adapted machine learning models on AWS platforms.

Research Publications

Peer-Reviewed Publications

1. C. N. Oguejiofor*, R. Rotunno, P. Sullivan, G. Bryan, and D. Richter, "The role of turbulence in intense hurricanes," *(In Prep.)*, 2023.
2. C. N. Oguejiofor*, C. Wainwright, J. Rudzin, and D. Richter, "Onset of tropical cyclone rapid intensification: Evaluating the response to length scales of sea surface temperature anomalies," *Journal of Atmospheric Sciences (Under Review)*, 2023.

Thesis

1. C. N. Oguejiofor* and B. J. Abiodun, *Simulating the influence of sea-surface-temperature (SST) on tropical cyclones over South-West Indian ocean, using the UEMS-WRF regional climate model.* URL: https://arxiv.org/abs/1906.08298.
2. C. N. Oguejiofor* and G. Guiliani, *Local and Non-Local PBL schemes in WRF model - Impact on the Intensification of Tropical cyclone Idai.* URL: https://drive.google.com/file/d/1F6uRMYqRKw06MXhs9J69rbkEwE8w-_F3/view.

Conference Proceedings

1. C. N. Oguejiofor*, C. Wainwright, J. Rudzin, and D. Richter, "Tropical cyclone rapid intensification: Evaluating the response to length scales of sea surface temperature anomalies.," in *American Meteorological Society's (AMS) 23rd Conference on Air-Sea Interaction - The 103rd AMS Annual Meeting*, Denver, Colorado, 2023.
2. C. N. Oguejiofor*, C. Wainwright, and D. Richter, "Investigating the dependence of hurricane intensity on varying sst patterns using idealized model simulations," in *Ocean Sciences Meeting (OSM)*, Held Virtually, 2022.
3. C. N. Oguejiofor*, C. Wainwright, and D. Richter, "Investigating the sensitivity of hurricane intensification to length scales of sea surface temperature (sst) heterogeneities.," in *35th Conference on Hurricanes and Tropical Meteorology (AMS)*, New Orleans, Louisiana, 2022.
4. C. N. Oguejiofor*, C. Wainwright, J. Rudzin, and D. Richter, "Tropical cyclone rapid intensification: Influence of multiscale anomalies in sea surface temperature (sst).," in *Front Range Tropical Cyclone Workshop*, Fort Collins, Colorado, 2022.

5 C. N. Oguejiofor*, C. Wainwright, and D. Richter, "Investigating the dependence of hurricane intensity on varying sst patterns using idealized model simulations.," in *American Geophysical Union (AGU)*, New Orleans, Louisiana, 2021.

6 C. N. Oguejiofor*, C. Wainwright, and D. Richter, "Investigating the dependence of hurricane intensity on varying sst patterns using idealized model simulations.," in *Midwest Student Conference on Atmospheric Research (MSCAR)*, Held Virtually, 2021.

Skills

Coding	Python, FORTRAN, Shell Scripting, MATLAB, SQL, R, LaTeX.
Packages	Numpy/Scipy, Pangeo, Tensorflow/Keras, xarray, Matplotlib, CDO, NCL/NCO, GRADS.
Models	Weather research and forecast (WRF), Cloud model (CM1), HYSPLIT.
Computing	High performance computing (MPI), Cloud Computing (AWS), Version control (Git).

Awards and Certifications

Grants & Awards

2023	**Computational Sciences and Visualization Award** - Center for Research Computing.	**$1,000**
2023	**3rd place oral presentation Award** - AMS 23rd Conference on Air-Sea interaction.	
2022 - 2023	**NCAR Fellowship Award** - Advanced Study Program (ASP) graduate visitor.	**$15,750**
2022 - 2024	**American Meteorological Society (AMS)**, air-sea interaction committee.	
2019	**UNESCO/IAEA Study Grant** - International Centre for Theoretical Physics.	**€9,600**
2017	**AAPG - L. Austin Weeks**, Undergraduate Research Grant Program.	**$500**
2012 - 2017	**MTN Foundation Scholarship**, for outstanding academic performance.	**$450/year**

Professional Certifications

May 2023	**Machine Learning in Weather and Climate** - by ECMWF.
Sept 2022	**Certified AWS Cloud Practioner** - by Udemy.

Teaching

Fall 2022	**CE 30125**: Statics (Prof. David. H. Richter).
2020; 2021	**CE 30125**: Computational Methods (Prof. David. H. Richter).
2021	**CE 40450**: Hydraulics (Prof. Andew Kennedy).

References

Prof. Joseph H. Fernando
Wayne and Diana Murdy Endowed Prof. of Engr.,
University of Notre Dame,
Harindra.J.Fernando.10@nd.edu

Dr. George H. Bryan
Section head, Meso. and Microscale Meteorology,
National Center for Atmospheric Research (NCAR),
gbryan@ucar.edu

Dr. Richard Rotunno
Senior scientist,
National Center for Atmospheric Research (NCAR),
rotunno@ucar.edu

Prof. David H. Richter (PhD. Advisor)
Civil and Environmental Engineering,
University of Notre Dame,
David.Richter.26@nd.edu