Chibueze N. Oguejiofor

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EDUCATION

- **University of Notre Dame** — Indiana, United States
  Doctorate (PhD.) - Civil & Environmental Engineering and Earth Sciences. — 2020 - 2024
  - ○ **Thesis**: *Tropical Cyclone rapid intensification - Influence of multiscale boundary-layer processes.*

- **International Center for Theoretical Physics (ICTP)** — Trieste, Italy
  Postgraduate (Pre-PhD.) in Earth Systems Physics. — 2019 - 2020

- **African Institute for Mathematical Sciences** — Kigali, Rwanda
  Masters (MSc.) in Mathematical Sciences — 2018 - 2019

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

SKILLS SUMMARY

- **Proficient:** Python, FORTRAN, Shell Scripting, MATLAB, SQL, R.
- **Experienced:** Numpy/Scipy stack, Pangeo, Tensorflow/Keras, xarray, Matplotlib, CDO, NCL/NCO, GRADS, Ferret.
- **Familiar:** High performance computing (MPI), Cloud Computing (AWS), Git, Satellite Intelligence.
- **Climate Models:** Weather research and forecast (WRF), Cloud model (CM1), HYSPLIT.

RESEARCH FOCUS

Hurricane modeling & air-sea interaction, Large Eddy Simulation (LES), Numerical weather prediction (NWP), Satellite data analysis, ARGO/ALAMO float data analysis, Machine Learning, Geostatistics and spatio-temporal modelling.

PROFESSIONAL EXPERIENCE

- **National Center for Atmospheric Research (NCAR)** — Boulder, Colorado
  Graduate Visiting Scientist, ASP (Host: Dr. George Bryan, MMM lab.) — Aug 2022 - Jan 2023
  - ○ LES of hurricane boundary layer forced with spatial heterogeneities in the eye-eyewall region.
  - ○ Air-sea flux modulation by boundary layer roll structures in tropical cyclones.

- **Indicina Inc.** — Remote
  Data Engineer (Part-time, Contractual) — Sept 2018 - Sept 2019
  - ○ Building and optimizing machine learning models for large fintech dataset.

- **KPMG Inc.** — Lagos, Nigeria
  Datascience Intern — Feb 2018 - Aug 2018
  - ○ Built and deployed a machine learning churn model as REST API for default forecast.

- **Carbon Inc.** — Lagos, Nigeria
  Datascience Intern — Nov 2017 - Jan 2018
  - ○ Adapted machine learning models on AWS services.

GRANTS AND FELLOWSHIPS

- NCAR Fellowship ($15,750) - Advanced Study Program (ASP) graduate visitor. — *2022*
- American Meteorological Society (AMS) air-sea interaction committee. — *2022 - 2024*
- UNESCO/IAEA Study Grant - International Centre for Theoretical Physics. — *2019*
- AAPG - L. Austin Weeks foundation scholarship grant. — *2017*
- MTN Foundation Scholarship for outstanding academic performance. — *2012 - 2017*

PEER-REVIEWED JOURNAL PUBLICATIONS

- **Oguejiofor, C.*, Wainwright, C., Rudzin, J., Richter, D., 2022** Onset of Tropical Cyclone Rapid Intensification: Evaluating the response to Length Scales of Sea Surface Temperature Anomalies, *J. Atmos. Sci.,* (*Under review*)

- **Wainwright, C., Oguejiofor, C.*, Richter, D., 2022** Quantifying spray mediation of air-sea fluxes in tropical cyclones using a coupled large eddy simulation and Lagrangian cloud model, *Geophysical Research Letters.* (*In prep.*)

CONFERENCES

- **Chibueze, N. Oguejiofor*, D. Richter, and C. Wainwright, 2022,:** Investigating the sensitivity of hurricane intensification to length scales of sea surface temperature (SST) heterogeneities. **35th Conference on Hurricanes and Tropical Meteorology (AMS)**, New Orleans.

- **Chibueze, N. Oguejiofor*, D. Richter, and C. Wainwright, 2022:** Investigating the dependence of hurricane intensity on varying SST patterns using idealized model simulations. **Ocean Sciences Meeting (OSM)**, held virtually.

- **Chibueze, N. Oguejiofor*, D. Richter, and C. Wainwright, 2021:** Investigating the dependence of hurricane intensity on varying SST patterns using idealized model simulations. **American Geophysical Union (AGU)**, Fall meeting, New Orleans.