Research Interests

I currently study deep ocean circulation in the North Atlantic Program as a PhD student under the Overturning in the Subpolar North Atlantic Program (OSNAP). My research examines abyssal flows across a wide range of physical and temporal scales to understand how flow varies in strength, position, and its hydrographic properties.

Experience

Publications

1. M. Devana, W.E. Johns (2021): Rapid Freshening of Iceland Scotland Overflow Water Driven by Entrainment of a Major Upper Ocean Salinity Anomaly, *Geophysical Research Letters*
2. W.E.Johns, M.Devana, A.Houk, S.Zou (2021): Moored Observations of the Iceland-Scotland Overflow Plume Along the Eastern Flank of the Reykjanes Ridge, *Journal of Geophysical Research: Oceans*

Education

1. 2013-2015 New York University, *Biochemistry*
2. 2015-2018 University of Southamption, UK, *Physical Oceanography - MSCi (integrated BSC & MSC)*
3. 2018-Present (*expected June 2023*) University of Miami, *Meteorology and Physical Oceanography - PhD*

Technical Skills

Coding

1. Python (Strong)
    - Experience using geospatial datasets with core earth science python packages (xarray,cartopy, dash, GMT, netcdf, numpy, scipy)
    - Developed python programs for oceanographic field work (CTD and mooring data processing, mooring trilateration, instrument calibrations)
    - Open science oriented methods
2. Julia (Proficient)
    - Experience with numerical fluid dynamics simulations, gesopatial and time series data analysis
3. Matlab (Strong)
4. Javascript (Proficient)

Professional Development

1. Graduate Undergraduate Mentoring (GUM) - *Co-Founder and Mentor (2020-2023)*

Awards

1. 2019 Outstanding Student Presentation Award - AGU Fall Meeting 2019
2. COMPASS Student Seminar Series Best Graphics 2019
3. COMPASS Student Seminar Series 3rd Place Overall 2020

References

- Wiliam E. Johns: Professor, Meteorology and Physical Oceanography, University of Miami, RSMAS