JAYNISE M. PÉREZ VALENTÍN

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EDUCATION

University of Notre Dame, IN   Jul 2016 – Jul 2022 (expected)
Ph.D. Environmental Fluid Dynamics

Universidad de Puerto Rico, Mayagüez, PR   Aug 2009 - Jul 2015
B.S. Theoretical Physics

TECHNICAL STRENGTHS

Computer Languages	MATLAB, GEE, Python, SQL, R
Software & Tools	QGIS, Arc GIS, RAOB, Latex, Excel, Mathematica

RESEARCH EXPERIENCE

National Oceanic and Atmospheric Administration, MD   May 2021 - Present
Internship - Office of Observations

· Conducting research on observing system evaluation studies for the NWS-OBS portfolio management and strategic planning
· Reporting suggestions for future observing platforms according to budget analysis

Environmental Fluids Dynamics Laboratory, ND   Jul 2018 - Present
Graduate Research - MISO-BOB Field Campaign

· Coordinating dropsonde release and aircraft C-130 flight using real-time satellite-derived data analysis and weather forecasting systems
· Managing and executing radiosonde releases in harsh environments
· Collecting observations from CTD, VMP, LiDAR, and Ceilometer instruments
· Processing and analyzing field and satellite data for air-sea interaction parametrization

Centre for Atmospheric and Oceanic Sciences, IISc, India   Sep 2019 – Nov 2019
Internship - Indo-U.S. Science & Technology Forum

· Analyzed atmospheric and upper-ocean data from field experiments, buoys, and radiosonde data in collaboration with field experts
· Developed an automatized code for batch processing radiosonde data
· Assisted several seminars from professionals in the field of atmospheric and ocean sciences

NASA Summer School, JPL, CA   Aug 2019
Summer school - Using Satellite Observations to Advance Climate Models

· Assisted on daily lectures, seminars, and workshops from experts in the fields of climate modeling, satellite processing, and data analysis
· Analyzed El Niño modes and variability using NASA's OpeNEX Climate Model Diagnostic Analyzer

Computational Hydraulics Laboratory, ND   Jul 2016 - May 2018
Graduate Research - Coastal Modeling and Assessment

· Developed an automatized coastal impact assessment using satellite image detection techniques for Hurricane Maria in Puerto Rico
· Implemented and validated a high-resolution regional WRF model as forcing to ADCIRC model coupled with the wave model SWAN
· Performed surge and wave NMS of tropical cyclones using various atmospheric data sources as initial conditions

CariCOOS-IOOS, PR Jan 2014 - Dec 2015
Undergraduate Research - WRF Model Validation

· Developed a real-time validation script to assist CariCOOS end-users in comparing the NWP forecasts to in-situ data
· Performed statistical solving algorithms with various validation parameters as a tool to measure models 'execution
· Installed and tested a weather station

TEACHING EXPERIENCE

University of Notre Dame Aug 2016 - Dec 2018
Graduate Teaching Assistant - Department of CEEES
Assisted faculty in strengthening concepts presented in lectures for ~100 students per semester, maintained flexible office hours both remotely and in-person, and graded tests and assignments for the following courses:
· Fluid Mechanics
· Hydraulics
· Computational Methods for Engineers

PUBLICATIONS

- [In progress] **Pérez Valentín, J. M.**, & Miller M. "Observing System Evaluation Studies: Ongoing challenges and recommendations for NWS-OBS Strategy in the Support and Enhancement of Observational Systems." Bulletin of the American Meteorological Society.
- [Submitted: in review] **Pérez Valentín, J. M.**, et al., "On the Synergy of Equatorial Convective Signals and Monsoon Intraseasonal Oscillations." Monthly Weather Review.
- Emily Shroyer et al., (including **Pérez Valentín, J. M.**), "Bay of Bengal Intraseasonal Oscillations and the 2018 Monsoon Onset". Bull. Amer. Meteor. Soc., doi.org/10.1175/ BAMS-D-20-0113.
- **Pérez Valentín, J. M.**, & Müller, M. F. "Impact of Hurricane Maria on beach erosion in Puerto Rico: Remote sensing and causal inference". Geophysical Research Letters, 47, 2020, doi.org/10.1029/2020GL087306.
- **Pérez Valentín, J. M.**, L. D. Aponte-Bermúdez, J. M. Morell and E. Rodríguez, "CariCOOS: Real-time data validation of high-resolution wind forecast". OCEANS 2015 - MTS/IEEE Washington, Washington, DC, 2015, pp. 1-7, doi: 10.23919/OCEANS.2015.7404368.

FELLOWSHIPS AND AWARDS

· Kinesis - Fernandez Richards Family Fellowship 2016 - 2022
· American Geophysical Union (AGU) Student Travel Grant 2021
· Research Internship in Science and Engineering (RISE) Fellowship 2019
· IndianaView Scholarship 2019
· CUWIP - Poster Presentation Award, Rutgers University 2015

LEADERSHIP EXPERIENCE

· Member of Paradigm Shift Program: coordinating and developing scientific presentations and activities for minority children at local schools 2018
· Directive member of Latino Graduate Student Association in Notre Dame: 2016 - 2018 organizing go-fund activities for hurricane and disaster relief