

ALEXANDRA N. RAMOS VALLE

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EDUCATION

University of Puerto Rico, Mayagüez Campus (UPRM)
B.S. Theoretical Physics, August 2009- December 2014
Minor in Atmospheric Science and Meteorology

Rutgers University
Department of Environmental Sciences
Ph.D. student- Graduate Program in Atmospheric Sciences, September 2015-present

RELATED COURSEWORK

Taken: Modern Math for Physical Sciences I & II, Algorithms/Computer Programming, Physical Computation, Introduction to Meteorology, Meteorology Instrumentation Course, Physical Meteorology, Physical Oceanography, Mesoscale Meteorology, Atmospheric Thermodynamics, Atmospheric Dynamics, Synoptic Meteorology, Special Topics Course on Forecasting and Fundamentals of Project Management

SKILLS

Fully bilingual: English and Spanish.
Experience preparing and presenting oral and written technical reports.
Programming languages: Matlab, IDL, Basic knowledge of C

EXPERIENCE

Student Researcher - Intern (40 hrs/week) *Jan 2015 – May 2015*
Department of Energy's Brookhaven National Laboratory, Upton, NY
Investigation of the relationships between marine boundary layer thermodynamic structure and cloud characteristics

Research Assistant – Intern (20 hrs/week) *June 2014 - July 2014*
Caribbean Coastal Ocean Observing System (CariCOOS), Mayaguez, PR.
Validation of Model Output vs ADCP Observation in the La Parguera Shelf

- ✓ Validated current velocity estimates of ROMS and NCOM AmSeas oceanographic models
- ✓ Deployed and retrieved an ADCP current meter to be used for the model validation

Undergraduate Research (15 hrs/week) *Sept 2013 - Dec 2013*
NOAA Crest Lidar Laboratory at University of Puerto Rico, Mayaguez, PR.
Water Vapor Estimate Comparison between AERONET and Radiosonde Data

- ✓ Retrieved precipitable water data from AERONET
- ✓ Estimated precipitable water values from radiosonde data

Research Assistant - Intern (40 hrs/week) *May 2013 - June 2013*
NOAA OAR Atlantic Oceanographic and Meteorological Laboratory, Miami, FL.
Future Changes in the Atlantic Warm Pool's Upper Ocean Heat Content: An Implication for the Occurrence of Intense Hurricanes

- ✓ Determined future projections of ocean heat content as given by IPCC scenarios
- ✓ Studied possible repercussions of the expected changes

Undergraduate Research (3 credit/hr) *Aug 2012 - May 2013*
University of Puerto Rico, Mayaguez Campus, Mayaguez, PR
Weather balloon launches

- ✓ Learned necessary skills to launch a weather balloon
- ✓ Learned to analyze upper air soundings

Research Assistant – Intern (40 hrs/week) *June 2012- Aug 2012*
NOAA OAR Atlantic Oceanographic and Meteorological Laboratory, Miami, FL.
Role of the Atlantic Warm Pool on the Development of Category Five Hurricanes

- ✓ Explored the thermodynamic properties of the Atlantic Warm Pool
- ✓ Determined a relationship between ocean heat content and the development of intense hurricanes

Undergraduate Research (3 credit/hr) *Aug 2011 - Dec 2011*
University of Puerto Rico, Mayaguez Campus, Mayaguez, PR
Validation of Precipitation Data of CASA Radars over Mayaguez, Puerto Rico

- ✓ Validated precipitation estimates of a local radar network

Research Assistant -Intern (40 hrs/week) *June 2011 - Aug 2011*
NOAA NWS Meteorological Development Laboratory, Silver Spring, MD
Correlating Errors in Hurricane Forecasts to Improve Probabilistic Storm Surge Model

- ✓ Validated methodology used by the probabilistic storm surge model (P-surge)

AWARDS

Association for the Sciences of Limnology and Oceanography Multicultural Program (ASLOMP) Participant, 2016

Department of Energy-SULI Program Participant. *Jan 2015 - May 2015*

Association for the Sciences of Limnology and Oceanography Multicultural Program (ASLOMP) Participant, 2015

NOAA Educational Partnership Program (EPP) Undergraduate Scholar, 2011-2013

Robert C. Byrd Scholarship, 2009-2011

ACTIVITIES

- ✓ Committee member and volunteer at “Angeles que Dejan Huellas” Foundation, 2013-present
- ✓ AMS Student Conference Planning Committee member, 2012-2014
- ✓ Leader of Meteorological Measurements committee in charge of weather station maintenance and validation, 2012-2014
- ✓ Member of the Society of Physics Students at UPRM, 2012-2013
- ✓ NWS Skywarn Spotter, 2012-present
- ✓ Leader of the newsletter committee of the American Meteorological Society Student Chapter at UPRM, 2011-2012
- ✓ Member of the AMS student chapter at UPRM, 2009- 2014