

# Tashiana C. Osborne

---

## EDUCATION

**Graduate Student, Climate-Ocean-Atmosphere Program** Sept 2015-Present  
Scripps Institution of Oceanography (SIO) at the University of California, San Diego

**Master of Science in Oceanography** Dec 2016  
Scripps Institution of Oceanography at the University of California, San Diego

**Bachelor of Science in Meteorology** Dec 2014  
**Bachelor of Science in Hydrology**  
Saint Cloud State University (SCSU), Saint Cloud, MN

- Minor: Mass Communication
- University Honors Program

## RESEARCH EXPERIENCE

**Climate Sciences Graduate Research**, Scripps Institution of Oceanography Sept 2015-Present  
Working within the Center for Western Weather and Water Extremes (CW3E), Advised by Dr. F. Marty Ralph and Dr. Art J. Miller. Focus: Earth's atmospheric, hydrologic, oceanic and climate systems. Aim: To engage in research centered on extreme precipitation events, which have implications for water resources, the economy, and other factors of human and ecosystem vitality. Recently: Investigating snow level in the Sierra Nevada mountain range region, and Western U.S. atmospheric river detection methods.

**PECAN Field Research**, Center for Severe Weather Research, Central Plains, USA May-July 2015  
Plains Elevated Convection at Night: Nocturnal field campaign focused on atmospheric conditions surrounding nighttime, warm-season mesoscale convective systems. Primary role: Mesonet vehicle operator, driver and navigator, deployed pods (quickly deployable weather stations) ahead of storm systems. Other training: Doppler on Wheels (DOW) vehicle navigator and operator.

**South Island Stereo Photogrammetry Research**, NSF, New Zealand/MN May 2014-Jan 2015  
Cloud stereo photogrammetric analysis of images taken during DEEPWAVE field campaign. Calculated changes in cloud and ocean wave measurements using MATLAB toolbox. Investigated coastal interactions for a marine cloud case near Kumara Junction, South Island. Continued research for SCSU Senior Thesis, Funded through NSF Grant AGS-1418519.

**DEEPWAVE New Zealand Field Research**, NCAR/NSF, Hokitika, New Zealand May-July 2014  
National Center for Atmospheric Research Earth Observing Lab (NCAR EOL). Field campaign focused on the dynamics of deeply propagating atmospheric gravity waves. Launched daily NCAR radiosondes from Hokitika and relayed information to flight crew. Captured time-lapse images of cloud formations for stereo photogrammetric analyses.

**Bahamas Paleoclimate Reconstruction Research**, NSF, Minneapolis, MN Jan 2013-May 2014  
Extended 2012 REU work to focus on blue hole climate indications. Analyzed Bahamian sediment cores and processed charcoal content of samples at the National Limnological Research Center (LRC) Lacustrine Core Facility (LacCore). Funded through an NSF NorthStar STEM Alliance Fellowship.

**National Weather Service (NWS) River Forecast Intern**, Chanhassen, MN Apr 2013-Feb 2014  
Outlined a system for flood warnings at NOAA North Central River Forecast Center. Designed and initiated a structure for communicating hydrology through social media. Exposed a resolvable error in the SAC-SMA model during introduction to UNIX.

**BASE CAMP I Fieldwork**, SCSU, St. Cloud, MN Oct 2012  
Launched radiosondes for Boundary Structure Experiments with Central MN Profiling. Worked with the Mobile Integrated Sounding System (MISS) provided by NCAR EOL.

**NSF REU Anthropogenic Climate Change Intern**, San Salvador, Bahamas/MN May-Nov 2012  
Funded by NSF Permits G234, G235 to study impacts human activities have on blue holes. Cored two inland blue holes, collected and identified samples of local flora and fauna. Employed advanced sediment coring techniques at LacCore involving XRF, smear slides, SEM, phytolith, diatom, ostracode, sediment processing and analysis.

**Ice Sediment Core Field Research**, St. Wendel, MN Jan 2011  
Utilized borehole drilling equipment and ice coring techniques for a human influence study.

## RESEARCH PRESENTATIONS

Osborne, T., and Billings, B., 2015: Coastal time-lapse stereo photogrammetry during deepwave New Zealand, *95<sup>th</sup> American Meteorological Society Annual Meeting*, Phoenix, AZ, January, 2015.

Osborne, T., and Billings, B., 2014: Investigating terrain effects on nearshore cloud evolution in deepwave through time-lapse photogrammetry, *47<sup>th</sup> American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2014.

Osborne, T., and Billings, B., 2014: Preliminary results of stereo photogrammetry during deepwave, *American Meteorological Society 16<sup>th</sup> Conference on Mountain Meteorology*, San Diego, CA, August, 2014.

Osborne, T., 2014: Bahamian climate reconstruction: Fire history, *17<sup>th</sup> Annual St. Cloud State University Colloquium*, St. Cloud, MN, April, 2014.

Osborne, T., 2014: Forecasting daily high temperatures using 850 millibar value adjustment, *17<sup>th</sup> Annual St. Cloud State University Colloquium*, St. Cloud, MN, April, 2014.

Osborne, T., 2014: Characteristics and anthropogenic indications of blue hole five, San Salvador, Bahamas, *S172, 94<sup>th</sup> American Meteorological Society Meeting*, Atlanta, GA, February, 2014.

Osborne, T., and coauthors, 2013: Distinctive characteristics of blue hole five, San Salvador, Bahamas,

*16<sup>th</sup> Annual St. Cloud State University Research Colloquium, St. Cloud, MN, April, 2013.*

Osborne, T., and coauthors, 2012: Distinctive characteristics of blue hole five, San Salvador, Bahamas. Geological Society of America, 105-5, *124<sup>th</sup> Geological Society of America Annual Meeting*, Charlotte, NC, November, 2012.

## **EDUCATIONAL EXPERIENCE**

**Science Journalism & Multimedia Intern**, NASA Goddard Space Flight Center Feb-May 2015  
Investigated, created and shared stories, features, videos, and content for NASA's web. Highlighted NASA missions, Earth sciences, space weather, astrophysics, heliophysics, and technology through science writing, social media, pitching, recording, and designing.

**Science Tutor**, SCSU Multicultural Student Services, St. Cloud, MN Dec 2010-Dec 2014  
Motivated and coached college students using experience in atmospheric and hydrologic sciences.

**Rocky Mountain Sustainability & Science Network Fellow**, NSF, Grand Teton, WY May 2014  
Program which provided intensive leadership training on global environmental and cultural sustainability, and field experience involving management and use of public lands.

**Honors Research Mentor**, SCSU Honors Program, St. Cloud, MN Jan-May 2014  
Mentored college students who would present at the SCSU Honors Research Colloquium. Directed each student through stages of the research process and planned class discussions.

**CNN International Climate Intern**, CNN World Headquarters, Atlanta, GA June-Aug 2013  
Investigated recent global scientific research involving climatic changes. Implemented TruVu Max graphics program to display meteorological events. Developed skills in on-air broadcasting and communicating concerns to viewers.

**Undergraduate Leadership Workshop Representative**, NCAR, Boulder, CO May 2013  
Five-day training at the National Center for Atmospheric Research supporting leadership in studies related to climate change and severe weather impacts on a local and global scale.

**Office & Professor's Assistant**, SCSU Dept. of Atmospheric & Hydrologic Sciences, MN June 2011-May 2012  
Graded student assignments, quizzes, and exams in multiple atmospheric science courses.

**Counselor**, SCSU Scientific Discovery Program, St. Cloud, MN May-Aug 2011  
Guided high school students from underrepresented groups through STEM training, research presentation preparations, and planning for educational and life goals.

**South Africa Educational Study**, Port Elizabeth, South Africa Mar 2011  
Studied South Africa's past, present, and future involving education, politics, and economics.

## NOTABLE RECOGNITIONS & AWARDS

Jane & Jiao Fan, PhD '94 Prize for Best Advocate for Graduate Studies	2017
NSF Graduate Research Fellowship	2016
San Diego Fellowship	2015
Commencement Speaker, Winter Graduation Ceremony, SCSU	2014
Certificate in Global Leadership & Environmental Sustainability, NSF	2014
President's Award for Dedication and Commitment to Peers, SCSU	2014
Minnesota Undergraduate Conf. Scholar, MN State Colleges & Universities	2014
Research Fellow, NorthStar STEM Alliance	2013, 2014
Mark M. Welter World Citizen Award, MN State Colleges & Universities	2014
Denise M. McGuire Student Research Award, SCSU Science & Engineering	2014
Research Colloquium Talk Finalist, SCSU Research & Sponsored Programs	2014
Meteorological Meeting Travel Grant, SCSU Research & Sponsored Programs	2014
American Meteorological Society (AMS) Assistantship	2014
Conference Ambassador, Power in Diversity Leadership Conference	2012, 2013, 2014
Minnesota Broadcasters Association Scholarship	2013
Leadership Scholar, National Center for Atmospheric Research	2013
National Weather Association (NWA) Central Iowa Scholarship	2013
Excellence in Leadership Award, SCSU	2013
Student Mentor of the Year, Multicultural Student Services (MSS)	2013
Award for Exceptional Leadership, MSS	2013
Finalist, SCSU Research Poster Colloquium	2013
Geological Society of America (GSA) Annual Meeting Assistantship	2012
University Ambassador, SCSU	2011, 2012

## ACTIVITIES AND LEADERSHIP

<b>Vice President Rep.</b> , Graduate Women in Science & Engineering	Sept 2015-Present
<b>Planning Committee Member</b> , AMS 2018 Annual Meeting	Jan 2016-Present
<b>Student Representative</b> , U. of CA Graduate Research Advocacy Day	Feb-Apr 2017
<b>Planning Committee Member</b> , AMS 2017 Annual Student Conference	Feb 2016-Feb 2017
<b>Vice President</b> , National Society of Black Engineers, SCSU	Aug 2012-Dec 2014
<b>Peer Mentor</b> , MSS, SCSU	Aug 2013-May 2014
<b>President</b> , Hydrology Club, SCSU	Aug 2013-May 2014
<b>Academic Collegiate Excellence Peer Mentor</b> , SCSU	Aug-Dec 2013
<b>Vice President</b> , American Indian Science & Engineering Society, SCSU	Aug 2011-May 2012

## ADDITIONAL PRESENTATIONS AND EXHIBITS

Osborne, T., 2014: Limitless in a field of endless discovery, 47<sup>th</sup> *American Geophysical Union Fall Meeting*, San Francisco, CA, December, 2014.

Osborne, T., and Williams, C., 2014: Why wind power? St. Cloud State puts the black and red in STEM, *USA Science & Engineering Festival*, Washington, DC, April, 2012, and 2014.

Osborne, T., and Ramirez, I., 2014: Ready to lead! Women of color shaping our campus, *5<sup>th</sup> Annual Power in Diversity Leadership Conference*, St. Cloud, MN, January, 2014.

Osborne, T., and Williams, C., 2013: The power of wind energy, *2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Annual STEM Day at the Minnesota State Fair*, St. Paul, MN, August, 2011, 2012, and 2013.

Osborne, T., 2013: Bahamas internship! Become a student leader and find opportunities, *4<sup>th</sup> Annual Power in Diversity Leadership Conference*, St. Cloud, MN, January, 2013.

Osborne, T., 2011: Past, present, and future: economy and politics of South Africa, *St. Cloud State University Honors Research Colloquium*, St. Cloud, MN, April, 2011.

## **PROFESSIONAL AFFILIATIONS**

- American Meteorological Society
- National Weather Association
- American Geophysical Union
- The Oceanography Society