# Benjamin R. Johnston

Department of Physical and Environmental Sciences, Texas A&M University – Corpus Christi
1701 Ennis Joslin Rd Apt 1031, Corpus Christi, TX 78412
724-984-9206
bjohnston1@tamucc.edu

## EDUCATION

**Texas A&M University - Corpus Christi – Corpus Christi, TX** **01/2014 – present**
Doctor of Philosophy in Coastal and Marine System Science (4.0 GPA)
**University of Maryland – College Park, MD** **08/2010 – 05/2012**
Master of Science in Atmospheric Science (3.0 GPA)
**California University of Pennsylvania – California, PA** **08/2005 – 12/2009**
Bachelor of Science in Meteorology and Environmental Earth Science (3.8 GPA)

## RELEVANT WORK EXPERIENCE

**Texas A&M University - Corpus Christi – Corpus Christi, TX**
**Adjunct Instructor** **01/2017 – present**

- Instructor of record for ATSC/ESCI 3403: Meteorology. Taught two lectures per week.
- Developed lecture material to discuss relevant course topics according to university guidelines and facilitated student discussion and interaction.
- Created and graded quizzes, exams, and a group project for student assessment.
- Held regular office hours and assisted students in both one-on-one and group settings.

**Research Assistant (Advisor: Dr. Feiqin Xie)** **09/2014 – present**

- Dissertation research focuses on the effects of deep convection on the vertical temperature structure in the tropical upper troposphere/lower stratosphere.
- Analysis utilizes collocated datasets including the NASA TRMM satellite to identify storm locations along with COSMIC GPS radio occultation (RO) and ERA-Interim reanalysis to obtain temperature profiles (in review).
- Conducted additional NASA-funded research on improving the retrieval of GPS RO profiles in the presence of atmospheric ducting conditions.

**NASA Goddard Space Flight Center – Greenbelt, MD** **06/2014 – 08/2014**
**Graduate Internship**

- Completed research under the tutelage of Dr. Santiago Gasso titled “Dust Activity and Transport in the High Latitudes”.
- Bi-regional study focused on the Patagonian Desert in South America and the Copper River Delta in Alaska.
- Meteorological data for Patagonia was provided by the Argentina National Weather Service and analyzed to determine seasonal/yearly changes for dust events.
- Synoptic weather maps and HYSPLIT4 model data was analyzed in Alaska to determine the typical synoptic setup and dust concentrations during a dust event.

**University of Maryland – College Park, MD** **08/2010 – 05/2012**
**Teaching Assistant (Advisor: Dr. Robert Hudson)**

- Responsible for instruction in the discussion sections of AOSC 200: Weather and Climate and the AOSC 201 lab. Taught two discussion sections and one lab section per week.
- Created PowerPoint presentations to summarize important facets of the main lectures.
- Facilitated "hands-on" lab exercises by reviewing the weekly assignment manual and addressing student issues to maximize their learning experience.
- Proctored exams, graded quizzes, midterm/final exams and labs, provided feedback on group projects and graded group projects.

**Research Assistant (Advisor: Dr. Ning Zeng)** **06/2011 – 05/2012**

- Successfully selected and defended master's thesis titled "The Effects of White Roofs and Pavement on Climate and Energy".
- Key results suggest that changing global roof albedo to a lighter color would reduce the global average surface temperature by 0.3°C as well as significantly reduce energy usage.
- Results varied significantly by latitude, with the largest energy reduction in the tropics.

## EDUCATION EXPERIENCE

- Led daily weather briefings, synoptic outlooks, and severe weather discussions in a classroom and voluntary group setting.
- Presented a variety of posters and PowerPoints on numerous synoptic meteorology topics, including severe weather, forecasting, and winter weather.
- Conducted original research on thunderstorms and remote sensing.
- Attended Intensive Summer School for Computing in Environmental Sciences (ISSCENS) computer programming workshop at the University of Virginia (Summer 2014).

## SKILLS AND ABILITIES

- Extensive experience using IDL programming language and ArcGIS.
- Working knowledge of Matlab and Python programming languages.
- Proficient in a Windows or Linux environment.
- Expert in Microsoft Office including Word, Excel, and PowerPoint.
- Widespread knowledge in earth science/meteorology/environmental science.
- Adept in the analytical techniques involved in successful weather forecasting.
- Adaptability in work and social settings allows creation of a productive work environment.
- Able to convey scientific information to colleagues and teach college courses to students.

## AFFILIATIONS

American Geophysical Union, American Meteorological Society, Corpus Christi American Meteorological Society Student Chapter

## CONFERENCE PRESENTATIONS

1. Johnston, B. R., F. Xie, and C. Liu, *The Effects of Deep Convection on Regional Temperatures in the Tropical Upper Troposphere/Lower Stratosphere*, AGU Fall Meeting, San Francisco, CA, December 12-16, 2016