

# Brian Joseph Vanderwende

Graduate Student at the University of Colorado – Boulder  
Department of Atmospheric and Oceanic Science

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## Address

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## Contact Information

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## Overview

Brian Vanderwende is a graduate research assistant in the Department of Atmospheric and Oceanic Science at the University of Colorado at Boulder. His teaching interests include alternative learning styles and the use of technology and games in the classroom to facilitate student learning. His research includes analyzing both observed data and output from atmospheric models to better our understanding of the interactions between the atmospheric boundary layer and wind turbines. He also has a strong background in meteorology and experience in weather forecasting.

## Education

Ph.D. Student, **Atmospheric Science**. University of Colorado at Boulder (GPA: **3.92**)  
2011 - M.S., **Atmospheric Science**. University of Colorado at Boulder (GPA: **3.91**)  
2009 - B.S., **Meteorology**. The Pennsylvania State University (GPA: **3.927**)

## Teaching Experience

June – July 2013, Graduate Part-Time Instructor, Weather and the Atmosphere  
Department of Atmospheric and Oceanic Science, University of Colorado at Boulder  
May 2012 – May 2013, Lead Graduate Teaching Assistant  
Department of Atmospheric and Oceanic Science, University of Colorado at Boulder  
Fall 2012, Guest instructor for Julie K. Lundquist, Weather and the Atmosphere  
Department of Atmospheric and Oceanic Science, University of Colorado at Boulder  
Spring 2011, Guest instructor for Baylor Fox-Kemper, Our Changing Climate  
Department of Atmospheric and Oceanic Science, University of Colorado at Boulder  
Fall 2009 – Spring 2010, Instructor, Weather and Atmosphere Lab  
Department of Atmospheric and Oceanic Science, University of Colorado at Boulder

## Professional Experience

May 2010 – Present, Graduate Research Assistant, Advisor: Julie K. Lundquist  
Department of Atmospheric and Oceanic Science, University of Colorado at Boulder

## Publications

1. **Vanderwende, BJ**, and JK Lundquist. 2012. The modification of wind turbine performance by statistically distinct atmospheric regimes. *Environ. Res. Lett.* **7** 034035.
2. Noone, D, C Risi, A Bailey, M Berkelhammer, DP Brown, N Buening, S Gregory, J Nusbaumer, D Schneider, J Sykes, **B Vanderwende**, J Wong, Y Meillier, and D Wolfe. 2013. Determining water sources in the boundary layer from tall tower profiles of water vapor and surface water isotope ratios after a snowstorm in Colorado. *Atmos. Chem. Phys.* **13** 1607-1623.

## Recent Presentations

1. **Vanderwende, BJ**, and JK Lundquist. Could Crop Height Impact the Wind Resource at Agriculturally Productive Wind Farm Sites? American Geophysical Union Fall Meeting 2013, San Francisco, CA.

2. **Vanderwende, BJ**, and JK Lundquist. The Modification of Wind Turbine Performance by Statistically-Distinct Atmospheric Regimes. American Wind Energy Association Annual Meeting 2013, Chicago, IL.

## Awards

1. Outstanding Student Poster Award: First Place at the American Meteorological Society's 20<sup>th</sup> Symposium on Boundary Layers and Turbulence.
2. Outstanding Student Presentation Award: First Place at the American Meteorological Society 2012 Annual Meeting.

## Internships

Summer 2008, NBC10 Philadelphia Weather Intern.

*Collected weather data; assisted in forecast preparation; researched past weather data.*

## Honors

### University of Colorado

Atmospheric and Oceanic Science Travel Grant to the 2012 American Meteorological Society Annual Meeting in New Orleans, LA

January 2012

### The Pennsylvania State University

Joel N. and Peggy Myers Scholar in Meteorology

2008 – 2009

Matthew J. Wilson Honors Scholar

2005 – 2009

Donald L. and Ellen Eberly Scholar in Meteorology

2007 – 2008

Charles L. and Anna R. Hosler Scholar in Meteorology

2006 – 2007

Juanita M. Tony Decillis Scholar

2005 – 2007

Penn State Dean's List Recipient – 8 out of 8 semesters

## Professional Societies

American Meteorological Society

2008 – Present

American Geophysical Union

2010 – Present

National Association of Geoscience Teachers

2013 – Present

## Professional Development

July 2013, Preparing for an Academic Career in the Geosciences Workshop, NAGT, Boulder, CO

May 2012, University of Colorado Graduate Teacher Program Graduate Lead Training, Boulder, CO

May 2012, Remote Sensing in Wind Energy Ph.D. Summer School, Renewable and Sustainable Energy Institute & The Technical University of Denmark, in Boulder, CO

September 2011, 1<sup>st</sup> Annual Front Range High Performance Computing Symposium, Colorado School of Mines, Golden, CO

June 2011, 12<sup>th</sup> Annual WRF Users' Workshop, NCAR, Boulder, CO

Spring 2011, Teaching Climate Seminar, University of Colorado at Boulder, Boulder, CO

## Computer Experience

Productivity: Microsoft Office/Libre Office

Programming: Fortran 90/95, C/C++, Java, Visual Basic, csh/bash, HTML/CSS

Visualization and data analysis: IDL, NCL, R, Excel, GrADS, ArcGIS

Computer Modeling: Weather Research and Forecasting Model

## University Service

Fall 2012 – Spring 2013, Department of Atmospheric and Oceanic Science Comps exam committee

Fall 2012 – Spring 2013, Department of Atmospheric and Oceanic Science Seminar committee