

## CURRICULUM VITAE

# Steven G. Decker

Address: Dept. of Environmental Sci., Rutgers Univ.,  
14 College Farm Rd., New Brunswick, NJ 08901  
Work: (848) 932-5750 • Cell: (908) 635-7401  
Email: [decker@envsci.rutgers.edu](mailto:decker@envsci.rutgers.edu)

## RESEARCH PLAN

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My research focuses on issues facing weather forecasters and the weather forecasting enterprise. This includes understanding weather phenomena that are difficult to forecast as well as their impact on society, learning how to make the best use of ensemble-based forecasts, probing the underlying reasons behind notable forecast busts, and improving the incorporation of satellite data into numerical weather prediction models.

## ACADEMIC POSITIONS

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2017– *Associate Teaching Professor*, Dept. of Environmental Sciences, Rutgers University  
2015– *Assistant Teaching Professor*, Dept. of Environmental Sciences, Rutgers University  
2014–2015 *Teaching Instructor*, Dept. of Environmental Sciences, Rutgers University  
2012–2014 *Instructor*, Dept. of Environmental Sciences, Rutgers University  
2011–2012 *Lecturer (Assistant Professor)*, Dept. of Environmental Sciences, Rutgers University  
2006–2011 *Assistant Professor*, Dept. of Environmental Sciences, Rutgers University

## EDUCATION

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Ph.D. Atmospheric and Oceanic Sciences (Minor: Mathematics), University of Wisconsin–Madison, Madison, WI, August 2006.  
M.S. Atmospheric and Oceanic Sciences, University of Wisconsin–Madison, Madison, WI, August 2003.  
B.S. Meteorology (Minor: Computer Science), with distinction, Iowa State University, Ames, IA, May 2000.

## TEACHING

### TEACHING NARRATIVE

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2016–present *Instructor*, School of Environmental and Biological Sciences, Portals to Academic Study Success (11:015:103). Teach one section of the School's one-credit course on how to be an effective college student for first-year students on academic probation.

- 2014–present *Co-Instructor*, Department of Environmental Sciences, Computational Methods for Meteorology (11:670:212). Introduce students to the basics of the Python programming language (with a little Fortran) as applied to computations typically carried out in the atmospheric and related sciences. Developed this course with Enrique Curchitser during the 2013–14 academic year.
- 2013–present *Instructor*, Department of Environmental Sciences, Meteorological Analysis (11:670:211). Introduce sophomores to some of the basic skills (e.g., analyzing a surface map) and vocabulary (e.g., what is a negatively tilted trough?) needed by meteorologists, and guide them through computer-based exercises that explore meteorological quantities and patterns.
- 2012–present *Instructor*, Department of Environmental Sciences, Severe Weather Forecasting Field Trip (11:670:334). Lead meteorology students on two-week trip to the Plains in search of severe convection. Students learn about severe convection by predicting, observing, and analyzing particular storms. The NWC (SPC, NSSL, et al.) and the ARM Southern Great Plains site are toured as conditions permit. This course was developed during the 2011–12 academic year and listed as 11:670:325 at that time.
- 2011–present *Co-Instructor*, Department of Environmental Sciences, Weather, Climate and Television I (11:670:111). Provide the meteorological content for this WeatherWatcher Living-Learning Community Academic Course, leading discussions, assigning readings, and arranging for guest speakers. An instructor from the School of Communication and Information provides the television expertise. In this semester, the focus is more on climate and communication skills.
- 2010–present *Co-Instructor*, Department of Environmental Sciences, Weather, Climate and Television II (11:670:112). Provide the meteorological content for this WeatherWatcher Living-Learning Community Academic Course, leading discussions, assigning readings, and arranging for guest speakers. An instructor from the School of Communication and Information provides the television expertise. In this semester, the focus is more on meteorology.
- 2007–present *Instructor*, Department of Environmental Sciences, Weather Analysis and Forecasting I: Synoptic Meteorology and Weather Analysis and Forecasting II: Mesoscale Meteorology (11:670:433/434). Teach senior-level undergraduates in this fall/spring sequence. In 2007–8, these courses were completely overhauled by combining three old courses into two replacements. The new courses were redesigned to make use of modern weather analysis techniques via computer lab assignments. In addition to case studies of past events, the current weather is analyzed in depth during some lab assignments as warranted.
- 2007–present *Guest Lecturer*, Department of Environmental Sciences, Remote Sensing of the Ocean and Atmosphere (11:670:451). Present two lectures (one lecture starting in 2016) on satellite interpretation for weather analysis and forecasting.

- 2010 *Instructor*, School of Environmental and Biological Sciences, The Byrne Seminars – The Weather in Weather: Prediction and Probability. Guided students in the collection, classification, and understanding of a variety of weather forecasts. Led discussions of concepts of probability and conditional probability and their relevance to weather prediction, other kinds of prediction, and science in general.
- 2008–2009 *Co-Instructor*, Graduate Program in Atmospheric Science, Fundamentals of Atmospheric Science II (16:107:502). Taught six lectures on weather systems to first-year graduate students.
- 2008 *Guest Lecturer*, Department of Environmental Sciences, Dynamics of the Oceans and Atmosphere (11:670:324). Introduced GEMPAK (a computer tool to analyze meteorological data) to the junior class during one lecture.
- 2007 *Co-Instructor*, Department of Environmental Sciences, Meteorological Analysis I (11:670:209). Introduced sophomores (with Alan Robock) to some of the basic skills (e.g., analyzing a surface map) and vocabulary (e.g., what is a negatively tilted trough?) needed by meteorologists.
- 2006 *Guest Lecturer*, Department of Environmental Sciences, Thermodynamics of the Atmosphere (11:670:323).

## CURRENT STUDENTS

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### Graduate Level

#### Major Advisor

##### **MS**

- 2015– Joseph Slezak. *Thesis*: The Impact of Entrainment on the Likelihood of Convective Initiation.

#### Serve on Thesis Committee

##### **PhD**

- 2015– Arielle Alpert

### Undergraduate Level

#### **Research**

- 2016–17 Phillip Yeh  
*Type*: George H. Cook Scholars Program  
*Project*: Model errors for the January blizzard of 2016.

#### **Cooperative Education (Research)**

- 2017 Alexa Trischler  
*Project*: Development of a 4D analysis framework animating the travel of an air parcel as it moves across the eastern U.S., ultimately

resulting in unhealthy ozone concentrations in New Jersey.  
(NJDEP)

**Cooperative Education (Private Industry)**

2017 Stephanie Van Oppen (Spot-On Weather)

**PAST STUDENTS**

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**Graduate Level**

**Major Advisor**

**PhD**

2012 Stephen Nicholls. *Dissertation*: Impact of four WRF modifications upon eight nor'easter simulations.

**MS**

2010 Brian Cerruti. *Thesis*: A statistical forecast model of weather-related damage to a major electric utility.

**Served on Thesis Committee**

**PhD**

2014 Anthony DeAngelis

2012 Paul Loikith

**Served on Oral Exam Committee**

**PhD**

2015 Max Pike

**Undergraduate Level**

**Research**

2016 Gianna Norwood  
*Type*: Elizabeth and Arthur Reich Scholarship  
*Project*: Improving wind forecasts

2016 Phillip Yeh  
*Type*: One-credit independent study  
*Project*: Re-examining the 540 rule

2015–2016 Ryann Wakefield  
*Type*: George H. Cook Scholars Program  
*Project*: The effects of antecedent soil moisture anomalies on tornado activity in the United States. (Presented at AMS Annual Meeting, where it was awarded Best Student Oral Presentation)

- 2015–2016 Syde Orange  
*Type:* Elizabeth and Arthur Reich Scholarship  
*Project:* Educating disadvantaged citizens about severe weather events and impacts.
- 2015–2016 Matthew Peters  
*Type:* Two-credit independent study  
*Project:* The sensitivity of airport delays at Newark, JFK, and LaGuardia Airports to weather conditions. (In collaboration with a student at San Jose State Univ.)
- 2014–2015 Colleen McHugh  
*Type:* George H. Cook Scholars Program  
*Project:* Thermodynamic changes associated with climate change applied to the 2010 Boxing Day Blizzard. (Presented at AMS Student Conference)
- 2013 Andrew Fisher  
*Type:* One-credit independent study  
*Project:* Composites of tornadic and nontornadic severe weather outbreaks in the Northeast. (Presented at AMS Student Conference)
- 2012 James Danco  
*Type:* Honors Tutorial  
*Project:* Analysis of top NJ nor'easters.
- 2010–2012 Ricardito Vargas  
*Type:* Heylar House Internship Project  
*Project:* Year 1: Verification of NCEP computer models.  
Year 2: Analysis of March 2010 nor'easter composites.
- 2010–2011 Christina Speciale  
*Type:* George H. Cook Scholars Program  
*Project:* The “surprise” 12–15 March 2010 wind event.
- 2011 Adam Rainear  
*Type:* One-credit independent study  
*Project:* The historical context of the nor'easter of 13–14 March 2010.
- 2010 Teresa Sikorski  
*Type:* Honors Tutorial  
*Project:* Characteristics of model soundings associated with severe weather affecting the conEdison service territory.
- 2010 Alyssa Caroprese  
*Type:* New York City Research Initiative  
*Project:* Societal impacts of winter storms in New Jersey.

- 2009–2010 Antonio Riggi  
*Type:* George H. Cook Scholars Program  
*Project:* An assessment of WRF temperature and precipitation forecasts for New Jersey.
- 2009–2010 Jacob Carlin  
*Type:* Elizabeth and Arthur Reich Scholarship  
*Project:* A multiscale analysis of overnight/morning tornadoes in southeastern New York, northern New Jersey, and southernmost New England. (Primary mentor: Michael Ekster, NWS Taunton, MA)
- 2009 Christina Speciale  
*Type:* One-credit independent research  
*Project:* An analysis of Atlantic coast nor'easter anomalies.
- 2008 Antonio Riggi  
*Type:* DES summer research internship  
*Project:* An assessment of WRF temperature forecasts for New Brunswick.

#### **Cooperative Education (Research)**

- 2011–2012 Robert D'Arienzo  
*Project:* Characteristics of model soundings associated with severe weather affecting the conEdison service territory.
- 2011 Giana Pietrafesa  
*Project:* Characteristics of model soundings associated with severe weather affecting the conEdison service territory.
- 2011 Teresa Sikorski  
*Project:* Characteristics of model soundings associated with severe weather affecting the conEdison service territory.
- 2010 Christina Speciale  
*Project:* Characteristics of soundings associated with severe weather affecting the conEdison service territory.
- 2008 Americo De Luca  
*Project:* An investigation into the atmospheric conditions that lead to increased public complaints of odors associated with Teterboro Airport.

#### **Cooperative Education (Broadcasting)**

- 2016 Alexa Trischler (News 12 New Jersey)
- 2013 Philip Leung (WKXW-FM)
- 2011-12 Joseph Martucci (WABC-TV and News 12 New Jersey)
- 2011 Shunondo Basu (KYW-TV)

**Cooperative Education (National Weather Service)**

- 2015 Evan Laguardia (Mount Holly)  
 2010 Chris DeVito (Mount Holly)

**Cooperative Education (Private Industry)**

- 2016 Joseph Fogarty (Spot-On Weather)

**Cooperative Education (PSE&G Weather Forecasters)**

- 2009 Philip Degliomini  
 2009 Allie Marquardt  
 2009 Vishana Ramdeen  
 2008–9 Thomas Collow  
 2008–9 Americo De Luca  
 2008–9 Stephanie Matheson  
 2008–9 Steve Sekula  
 2008 Adam Zakrzewski  
 2008 Tyler Adams  
 2008 Chris Castellano  
 2008 Brian Cerruti  
 2008 Amanda Kamenitz  
 2008 Megan Leigh  
 2008 Aimee Treutlein

**High-school Level**

- 2010 David Kelly  
*Type:* New York City Research Initiative  
*Project:* Societal impacts of winter storms in New Jersey
- 2010 Kelvin Quarcoo (Middle School Teacher)  
*Type:* New York City Research Initiative  
*Project:* Societal impacts of winter storms in New Jersey
- 2007 Nicole Heyl  
*Project:* A 25-year climatology of tornadoes in New Jersey and the Northeast

**RESEARCH****REFEREED JOURNAL PUBLICATIONS**

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- Nicholls<sup>†</sup>, S. D., S. G. Decker, W.-K. Tao, S. E. Lang, J. J. Shi, and K. Mohr, 2017: Influence of bulk microphysics schemes upon Weather Research and Forecasting (WRF) version 3.6.1 nor'easter simulations. *Geosci. Model Dev.*, **10**, 1033–1049.
- Nicholls<sup>†</sup>, S. D., and S. G. Decker, 2015: Impact of coupling an ocean model to WRF nor'easter simulations. *Mon. Wea. Rev.*, **143**, 4997–5016.

<sup>†</sup> Student advisee

- DeAngelis, A. M., A. J. Broccoli, and S. G. Decker, 2013: A comparison of CMIP3 simulations of precipitation over North America with observations: Daily statistics and circulation features accompanying extreme events. *J. Climate*, **26**, 3209–3230.
- Decker, S. G., 2012: Development and analysis of a probabilistic forecasting game for meteorology students. *Bull. Amer. Meteor. Soc.*, **93**, 1833–1843.
- Cerruti<sup>†</sup>, B. J., and S. G. Decker, 2012: A statistical model of weather-related damage to a major electric utility. *J. Appl. Meteor. Clim.*, **51**, 191–204.
- Decker, S. G., and D. A. Robinson, 2011: Unexpected high winds in northern New Jersey: A downslope windstorm in modest topography. *Wea. Forecasting*, **26**, 902–921.
- Cerruti<sup>†</sup>, B. J., and S. G. Decker, 2011: The Local Winter Storm Scale: A measure of the intrinsic ability of winter storms to disrupt society. *Bull. Amer. Meteor. Soc.*, **92**, 721–737.
- Decker, S. G., 2010: Nonlinear balance in terrain-following coordinates. *Mon. Wea. Rev.*, **138**, 605–624.
- Decker, S. G., and J. E. Martin, 2005: A local energetics analysis of the life cycle differences between consecutive, explosively deepening, continental cyclones. *Mon. Wea. Rev.*, **133**, 295–316.
- Gutowski, W. J., S. G. Decker, R. A. Donavon, Z. Pan, R. W. Arritt, E. S. Takle, 2003: Temporal-spatial scales of observed and simulated precipitation in central U.S. climate. *J. Climate*, **16**, 3841–3847.

## REFEREED CONFERENCE PROCEEDINGS

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- Chen, S., X. Ji, M. Veeraraghavan, S. Emmerson, J. Slezak<sup>†</sup>, and S. Decker, 2016: A cross-layer multicast-push unicast-pull (MPUP) architecture for reliable file-stream distribution. *Proc. 40<sup>th</sup> Annual IEEE Computer Software and Applications Conference Symposium (COMPSAC 2016)*, 535–544.

## REFEREED BOOK CHAPTERS

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- Decker, S. G., and D. A. Robinson, 2016: Sandy from meteorological and climatological perspectives: Not even the worst possible storm. *Taking Chances on the Coast After Hurricane Sandy*, K. M. O'Neill and D. J. Van Abs, Eds., Rutgers Univ. Press.

## UNREFEREED PUBLICATIONS

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### Book Reviews

- Moore, Peter. *The Weather Experiment: The Pioneers Who Sought to See the Future*. Farrar, Straus and Giroux, 2015. October 2015 issue of *Choice: Current Reviews for Academic Libraries* (Review No. 53-0796).
- Henson, Robert. *The Thinking Person's Guide to Climate Change*. American Meteorological Society, 2014. February 2015 issue of *Choice: Current Reviews for Academic Libraries* (Review No. 52-3120).

<sup>†</sup> Student advisee



Barry, Roger G. *Essentials of the Earth's Climate System*. Cambridge, 2014. January 2015 issue of *Choice: Current Reviews for Academic Libraries* (Review №. 52-2555).

Krishnamurti, T. N., Lydia Stefanova, and Vasubandhu Misra. *Tropical Meteorology: An Introduction*. Springer, 2013. February 2014 issue of *Choice: Current Reviews for Academic Libraries* (Review №. 51-3267).

Inness, Peter and Steve Dorling. *Operational Weather Forecasting*. Wiley, 2013. November 2013 issue of *Choice: Current Reviews for Academic Libraries* (Review №. 51-1508).

## GRANT FUNDING

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- 1/2014–4/2015 (Co-PI with Cara Cuite, William Hallman, Chris Obropta, Karen O'Neill, and David Robinson) Best Practices in Coastal Storm Risk Communication. Funded by the New Jersey Sea Grant Coastal Storm Awareness Program in the amount of \$149,806.
- 10/2013–9/2015 (Co-PI with Malathi Veeraraghavan, U. of Virginia; Steve Emmerson, UCAR; and Jerrold Robaidek, UW–Madison; subcontract) CC-NIE Integration: Leveraging DYNES for Weather Data Distribution on Multicast Virtual Circuits. Funded by the National Science Foundation in the amount of \$50,000.
- 6/2009–2/2010 (Co-PI with David Steube, ASA; subcontract) High Resolution Modeling of Meteorological, Hydrodynamic, Wave and Sediment Processes in SAMP Study Area. Funded by the State of Rhode Island in the amount of \$19,273.
- 5/2009–4/2012 (Co-Investigator) Towards an Improved Understanding of Simulated and Observed Changes in Extreme Precipitation. Funded by NOAA in the amount of \$329,625. PI: Anthony J. Broccoli.
- 7/2008–6/2009 Upgrading the Rutgers Weather Center to Meet Today's Needs. Funded by the Unidata Program Center in the amount of \$16,455.
- 6/2008–6/2010 Rutgers Advanced Meteorological Monitoring and Forecast System in Support of PSE&G Operations. Funded by PSE&G in the amount of \$109,793.
- 1/2008–5/2008 Rutgers Advanced Meteorological Monitoring and Forecast System in Support of PSE&G Operations. Funded by PSE&G in the amount of \$11,624.

## CONTRIBUTED CONFERENCE TALKS

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- Slezak<sup>†</sup>, J., and S. G. Decker, 2017: The impact of entrainment on the likelihood of convective initiation: Dilute CAPE as a forecasting tool. Preprints, *28<sup>th</sup> Conf. on Weather Analysis and Forecasting/24<sup>th</sup> Conf. on Numerical Weather Prediction*, Seattle, WA, Amer. Meteor. Soc., 5A.4.
- Cuite, C. L., S. G. Decker, D. A. Robinson, W. K. Hallman, K. M. O'Neill, R. E. Morss, and J. L. Demuth, 2016: Experimental testing of evacuation messages in Sandy-affected areas. Preprints, *11<sup>th</sup> Symp. on Societal Applications: Policy, Research and Practice*, New Orleans, LA, Amer. Meteor. Soc., 6.5.
- Decker, S. G., 2015: A Python implementation of an analytic QG model for the synoptic classroom. Preprints, *24<sup>th</sup> Symp. on Education*, Phoenix, AZ, Amer. Meteor. Soc., 5.1.

<sup>†</sup> Student advisee

- Decker, S. G., V. Ghate, and M. Miller, 2014: The mesoscale structure of drizzling stratocumulus clouds: Perspectives from observations and large eddy simulations. Preprints, *12<sup>th</sup> Symp. on the Coastal Environment*, Atlanta, GA, Amer. Meteor. Soc., 1.1.
- Decker, S. G., V. Ghate, and M. Miller, 2013: Large eddy simulations over Cape Cod in support of the ARM Two-Column Aerosol Project. Preprints, *11<sup>th</sup> Symp. on the Coastal Environment*, Austin, TX, Amer. Meteor. Soc., 2.1.
- Decker, S. G., 2012: Experiences with a probabilistic forecasting game for meteorology students. Preprints, *21<sup>st</sup> Symp. on Education*, New Orleans, LA, Amer. Meteor. Soc., 3.4.
- Nicholls<sup>†</sup>, S. D., and S. G. Decker, 2012: Comparison of coupled and uncoupled WRF-ROMS simulations of eight nor'easter cases. Preprints, *16<sup>th</sup> Symp. on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface*, New Orleans, LA, Amer. Meteor. Soc., 8.3.
- Decker, S. G., and A. Cope, 2011: The nor'easter of 13–14 March 2010: An underforecast wind event that produced record damage. *15<sup>th</sup> Cyclone Workshop*, Pacific Grove, CA, Naval Research Laboratory–Monterey.
- Scalzo, F., L. P. Johnson, J. Frost, B. E. Carlson, P. Marchese, C. Rosenzweig, S. A. Austin, D. M. Peteet, L. Druyan, M. Fulakeza, S. Gaffin, H. Baruh, S. Decker, S. Thangam, J. Miles, F. Moshary, W. Rossow, S. Greenbaum, and T. K. Cheung, 2010: The New York City Research Initiative: A model for undergraduate and high school student research in earth and space sciences and space technology. *2010 AGU Fall Meeting*, San Francisco, CA, Amer. Geophys. Union, ED21B-0673.
- Speciale<sup>†</sup>, C., B. Hertell, and S. Decker, 2010: Improving New York City thunderstorm forecasts. Preprints, *12<sup>th</sup> Northeast Regional Operational Workshop*, Albany, NY, NWS/SUNY-Albany, 14.
- Cerruti<sup>†</sup>, B. J., and S. G. Decker, 2010: Using multiple linear regression to develop a plant damage model for a major utility company. Preprints, *1<sup>st</sup> Conf. on Weather, Climate, and the New Energy Economy*, Atlanta, GA, Amer. Meteor. Soc., J11.2.
- Decker, S. G., D. A. Robinson, and N. Stefano, 2009: A downslope windstorm in New Jersey? An analysis of the 4 January 2009 high-wind event. Preprints, *23<sup>rd</sup> Conf. on Weather Analysis and Forecasting*, Omaha, NE, Amer. Meteor. Soc., 2B.4.
- Cerruti<sup>†</sup>, B. J., S. G. Decker, L. A. Bowers, J. Carlson, and W. K. Wittman, 2009: Undergraduate forecasting and nowcasting for a major urban public utility. Preprints, *8<sup>th</sup> Symp. on the Urban Environment*, Phoenix, AZ, Amer. Meteor. Soc., J22.6.
- Decker, S. G., 2003: Potential applications of local energetics diagnostics to Antarctic forecasting. Preprints, *Antarctic Meteorological Research Center Annual Meeting*, Madison, WI, Antarctic Meteorological Research Center.
- Decker, S. G., 2002: Life cycle differences between consecutive rapidly deepening continental cyclones. Preprints, *19th Conf. on Weather Analysis and Forecasting*, San Antonio, TX, Amer. Meteor. Soc., CD-ROM, 2.3.

<sup>†</sup> Student advisee

## CONFERENCE POSTERS

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- Miller, M., B. Raney, V. Ghate, and S. Decker, 2014: A large eddy simulation of cloud radar observations. Poster, *5th Atmospheric System Research Science Team Meeting*, Potomac, MD, Dept. of Energy.
- Decker, S. G., 2014: The nor'easter that wasn't: Extratropical cyclogenesis without Hurricane Sandy. Poster, *Symp. on Superstorm Sandy and the Built Environment: New Perspectives, Opportunities, and Tools*, Atlanta, GA, Amer. Meteor. Soc., 868.
- DeAngelis, A. M., A. J. Broccoli, and S. G. Decker, 2013: Evaluation of CMIP3 and CMIP5 simulations of heavy precipitation and its associated physical mechanisms over North America. Poster, *U.S. CLIVAR Workshop: Analyses, Dynamics, and Modeling of Large Scale Meteorological Patterns Associated with Extreme Temperature and Precipitation Events*, Berkeley, CA, U.S. Climate Variability and Predictability Research Program.
- Rizzo<sup>†</sup>, P., N. Peterson<sup>†</sup>, P. J. Croft, and S. G. Decker, 2012: Cloud observations and morphology: Physical and operational storm environmental chase clues. Poster, *37th Annual Meeting*, Madison, WI, Nat'l. Wea. Assoc., P0.16.
- Nicholls<sup>†</sup>, S. D., and S. G. Decker, 2012: Impact of cycled 3DVAR assimilation of COSMIC observations on simulated dynamical and thermodynamical structures in nor'easters. Preprints, *9th Annual Symp. on Future Operational Environmental Satellite Systems*, New Orleans, LA, Amer. Meteor. Soc., 288.
- DeAngelis, A. M., A. J. Broccoli, and S. G. Decker, 2012: Evaluation of 20th Century climate model simulations of heavy precipitation over North America. Preprints, *24th Conf. on Climate Variability and Change*, New Orleans, LA, Amer. Meteor. Soc., 94.
- Nicholls<sup>†</sup>, S. D., and S. G. Decker, 2011: Impact of cycled 3DVAR assimilation of COSMIC observations on nor'easter simulations. Preprints, *15th Symp. on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans and Land Surface*, Seattle, WA, Amer. Meteor. Soc., 543.
- Nicholls<sup>†</sup>, S. D., and S. G. Decker, 2011: A comparison of WRF 3.2 and WRF 3.1.1 forecasts of seven nor'easter events. Preprints, *24th Conf. on Weather Analysis and Forecasting/ 20th Conf. on Numerical Weather Prediction*, Seattle, WA, Amer. Meteor. Soc., 475.
- Cerruti<sup>†</sup>, B. J., and S. G. Decker, 2011: The Winter Storm Scale: A measure of the ability of winter storms to disrupt society. Preprints, *6th Symp. on Policy and Socio-economic Research*, Seattle, WA, Amer. Meteor. Soc., 663.
- Decker, S. G., 2008: The WRF Model and Fortran array syntax: Oil and water? Preprints, *9th WRF Users' Workshop*, Boulder, CO, National Center for Atmospheric Research, P11.4.
- Decker, S. G., 2005: wrf2gem: A program to convert WRF netCDF output to GEMPAK format. Preprints, *6th WRF / 15th MM5 Users' Workshop*, Boulder, CO, National Center for Atmospheric Research, CD-ROM, 3.44.
- Decker, S. G., D. M. Schultz, and C. A. Doswell III, 1998: Synoptic-scale signals associated with flash floods. Preprints, *19th Conf. on Severe Local Storms*, Minneapolis, MN, Amer. Meteor. Soc., P18.3.

<sup>†</sup> Student advisee

## INVITED PARTICIPATION IN WORKSHOPS

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Panelist during Breakout Session on “Floods and Nor’easters” at the “Symposium on the Climate Ahead: Climate Change and Extreme Weather Events” held at Rutgers University on April 6, 2009.

## INVITED LECTURES

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Talk on “Using Excalibur to Generate Large Eddy Simulations in Support of the TCAP Campaign” presented at the Rutgers Discovery Informatics Institute Open House on October 4, 2013.

Talk on “Coastal Storms of the New Jersey Shore” presented at the Climate Change and Coastal Hazards Symposium (Climate Symposium 2011) in Toms River, NJ, on May 25, 2011.

Seminar on “The Local Energetics Perspective on the Life Cycles of Midlatitude Synoptic-Scale Disturbances” presented at Stony Brook University on April 30, 2008.

Talk on “Morphological Data Assimilation” presented at Rutgers University on January 26, 2006.

## SERVICE

### DEPARTMENTAL COMMITTEES

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- 2016– *Member*, Dept. of Env. Sci. Curriculum and Education Committee  
2008– *Member*, Dept. of Env. Sci. Computer Committee (Chair, 2013–)  
2007–2008 *Member*, Dept. of Env. Sci. Recruitment and Outreach Committee

### COLLEGE AND UNIVERSITY COMMITTEES

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- 2015– *Member*, School of Env. and Biological Sciences Curriculum and Educational Policy Committee  
2014– *Member*, Graduate Program in Atmospheric Science Admissions and Academic Standards Committee. Was previously member 2007–2010. Chair in 2009–2010, 2016–2017.  
2010–2013 *Member*, Graduate Program in Atmospheric Science Nominations Committee  
2007–2010 *Member*, Coeus Proposal Development Focus Group  
2007 *Member*, Ad-Hoc CEP Hiring Committee

### OTHER RUTGERS SERVICE

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- 2016– *Department Representative*, Joint AMS/AGU Heads and Chairs Meeting

† Student advisee

|            |  |
|------------|--|
| 2015–      | <i>Director</i> , Meteorology Undergraduate Program                              |
| 2015–      | <i>Academic Advisor</i> , Transfer Students Majoring in Meteorology              |
| 2007–      | <i>Coordinator</i> , Rutgers Weather Center Website                              |
| 2013–2017  | <i>Academic Advisor</i> , First-year Students Intending to be Meteorology Majors |
| 2007–2013  | <i>Academic Advisor</i> , Class of 2010/13 Meteorology Majors                    |
| 2011–2012  | <i>Interviewer</i> , Honors Interview Day  |
| 2006–2009  | <i>Secretary</i> , Dept. of Env. Sci. Faculty Meetings                           |
| 2006–2009  | <i>Local Administrator</i> , Weather Challenge                                   |
| 2007, 2008 | <i>Proctor</i> , Dynamics of the Atmosphere (11:670:324)                         |
| 2007–2008  | <i>Interim Administrator</i> , Local Data Manager Server                         |
| 2006       | <i>Proctor</i> , Thermodynamics of the Atmosphere (11:670:323)                   |

## MEMBERSHIP IN PROFESSIONAL SOCIETIES

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| 1997– | American Meteorological Society |
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## MEMBERSHIP ON NATIONAL PANELS

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| 2015–     | <i>Member</i> , Unidata Users Committee              |
| 2010–2011 | <i>Member</i> , Daale Scholarship Decision Committee |
| 2009–2010 | <i>Member</i> , Unidata IDV Steering Committee       |

## PAPER REVIEWING

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In the past three years, I have reviewed manuscripts for:

- Journal of Applied Meteorology and Climatology (2)
- Journal of Climate (2)
- Atmosphere–Ocean (1)
- Natural Hazards (1)
- Quarterly Journal of the Royal Meteorological Society (1)
- Scientific Reports (1)

## OTHER REVIEWING

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| 2014 | <i>Reviewer</i> , American Geosciences Institute Critical Issues Program |
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## OUTREACH / COMMUNITY SERVICE

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| 2017 | Interviewed for The Daily Targum story “U. becomes home to NBC weather radar” published February 7.                   |
| 2015 | Interviewed for The Daily Targum story “New Jersey experiences topsy-turvy weather during Sept.” published October 5. |

- 2014 Provided tour of the weather station in Rutgers Gardens for the Camp Cool Environment summer camp on July 30.
- 2014 Interviewed for The Daily Targum story “Snow cover, temperature fluctuations pose climate threat” published February 17.
- 2013 Interviewed for the Long Island Press story “Is LI Still Due for the Big One? Experts Differ on ‘Storm of the Century’” published October 2.
- 2012 Featured in July 13 issue of the *Courier News* discussing the severe weather field trip.
- 2012 Interviewed live on the February 27 Wake Up Rutgers broadcast to discuss the new Severe Weather Field Trip course.
- 2011 Discussed tornadoes and nor’easters with three groups of middle-schoolers from Atlantic City during the 4-H Rutgers Science Saturdays program November 19.
- 2011 Interviewed for The Record story “Old Man Winter might make an early appearance” published October 29.
- 2011 Interviewed live on the June 3 PIX 11 Morning News regarding extraordinary tornado activity during the spring of 2011.
- 2010 Interviewed twice on My9 News regarding hot weather in July and August.
- 2009 Program on atmospheric optics entitled “Rainbows and Sundogs and Halos, Oh My!” presented at Franklin Township Public Library, Somerset, NJ, October 21.
- 2009 Faculty Seminar on atmospheric optics presented at two Rutgers Summer Orientation Programs in August.
- 2009 Interviewed during a television broadcast of *NJN News* on August 5 to discuss recent weather.
- 2009 Interviewed for Hunterdon County Democrat story “Keeping an Eye on the Sky” published July 30.
- 2009 Interviewed for Bloomberg News story “Yankee Stadium Home Run Pace Doesn’t Make It Hitters’ Park Yet” published May 15.
- 2007, 2008 Presented air pressure demonstration as part of the Environmental Sciences open house during Ag Field Day.
- 2007 Participated in New Faculty Travelling Seminar

## **AWARDS AND HONORS**

### **NATIONAL**

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- 2000–2004 National Science Foundation Graduate Fellowship
- 1999 Pi Mu Epsilon, Honorary National Mathematics Society

- 1999           AMS Hagemeyer Undergraduate Scholarship
- 1998           Phi Beta Kappa

## **UNIVERSITY**

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- 2003           Colloquium Student Service Award
- 2001           Schwerdtfeger Award for Excellence as a First-year Graduate Student
- 2000           University of Wisconsin–Madison Graduate Fellowship

## **NATIONAL COLLEGIATE WEATHER FORECASTING CONTEST**

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- 2005           First Place, Grad Student Division, for Alpena, MI
- 2003           First Place, Grad Student Division, for Burns, OR
- 2002           First Place, Overall, for Boise, ID