

Robert E. Hart

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Florida State University

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Florida State University
404 Love Building
1017 Academic Way
Tallahassee, FL 32306-4520

Updated as of 1 February 2012

GENERAL INFORMATION

PERSONAL

Birthdate: 14 December 1972 (Age 39), North Branford, CT, United States
Citizenship: United States

EDUCATION (Meteorology)

| | | |
|------|-------|--|
| 2001 | Ph.D. | Pennsylvania State University. Major Professor: J. Evans |
| 1997 | M.S. | Pennsylvania State University. Major Professor: G. Forbes |
| 1995 | B.S. | Pennsylvania State University (Honors). Computer Science Minor |

PROFESSIONAL POSITIONS

| | |
|-----------|--|
| 2010- | Assoc. Prof., Dept. of Earth, Ocean, and Atm. Science, Florida State Univ. |
| 2009-2010 | Associate Professor, Dept. of Meteorology, Florida State University |
| 2003-2009 | Assistant Professor, Dept. of Meteorology, Florida State University |
| 2002-2003 | NCAR/UCAR Visiting Scientist |

PROFESSIONAL ORGANIZATIONS

American Meteorological Society
American Geophysical Union

HONORS AND AWARDS

| | |
|------------|--|
| 2011 | Transformation through Teaching Award (FSU) |
| 2010-2012 | Werner A. and Shirley B. Baum Endowed Professorship (FSU) |
| 2008 | BAMS Editor's Papers of Note, Amer. Met. Society (for Hart et al. 2007, MWR) |
| 2007 | American Meteorological Society Banner I. Miller Award (for Hart 2003, MWR) |
| 2001, 2002 | Special Award for Teaching, Pennsylvania State University |
| 1998-2001 | Environmental Protection Agency STAR Fellowship |
| 1998-2000 | NASA Space Grant Fellowship |
| 1999 | National Weather Service Eastern Region Outstanding Service Award |
| 1998 | NCAR Advanced Studies Program (ASP) Hurricanes Colloquium |
| 1998 | Pennsylvania State University Robert O. Cole Scholarship |
| 1997-1998 | Pennsylvania State University Earth System Science Center Fellowship |
| 1995-1997 | UCAR COMET Graduate Fellowship |
| 1995-1997 | Pennsylvania State University Ann Wilson Graduate Fellowship |
| 1995 | Pennsylvania State University John A. Dutton Dynamics Award |
| 1994 | Web Page Content Awards awarded by Point.com and Magellan.com |
| 1991 | Valedictorian, High School, North Branford, CT |

NATIONAL AND INTERNATIONAL CHAIRS AND COMMITTEES

| | |
|-----------|--|
| 2012 | Chair, 30 th AMS Hurricanes and Tropical Meteorology Conference |
| 2009- | Member, NASA Hurricane Science Team for GRIP Field Project |
| 2009-2011 | Chair, UCAR URC/PACUR NSF Proposal Review Subcommittee |
| 2009-2011 | Member, UCAR URC/PACUR NSF Proposal Review Subcommittee |
| 2008 | Session Chair, AMS Hurricanes and Tropical Meteorology Conference |
| 2008 | Conference Chair, AMS Special Hurricanes Symposium |
| 2007-2011 | Member, UCAR URC/PACUR Committee |
| 2007 | Session Chair, 1 st International Summit on Hurricanes and Climate Change |
| 2007-2008 | Chair, Florida State University Tropical Meteorology Faculty Search Committee |
| 2006- | Member, AMS Hurricanes and Tropical Meteorology Steering Committee |
| 2006 | Chair, AMS Max Eaton Award Selection Committee |
| 2005 | Group Chair, 6 th International Workshop on Tropical Cyclones |
| 2004 | Member, AMS Max Eaton Award Selection Committee |
| 2003 | Session Chair, Cyclone Workshop, Val-Morin, Quebec |

DEPARTMENT AND UNIVERSITY SERVICE

| | |
|----------------------|--|
| System Administrator | Beowulf Cluster, Self-Created: 150CPUS, 425GB memory, and 100TB of disk space utilized by seven faculty members and 65 students since 2003. Also, Linux installation on approximately one dozen student and faculty laptops |
| Developer | Department Electronic Maproom |
| Chair | EOAS Department Faculty Search Committee |
| Chair | EOAS Dept. Meteorology Area Undergraduate Curric. Comm. |
| Chair | EOAS Department Merger Infrastructure Committee |
| Chair | Faculty Search Committee |
| Chair | Chi Epsilon Pi Meteorology Honor Society |
| Chair | EOAS Meteorology Undergraduate Curriculum Committee |
| Member | EOAS Department Chair Search Committee |
| Member | FSU College of Arts and Sciences Reorganization Committee |
| Member | EOAS New Building Committee |
| Member | EOAS Department Merger Strategic Planning Committee |
| Member | Department Executive Committee |
| Member | Department Chair Search Committee |
| Member | Departmental Awards Committee |
| Member | Undergraduate Curriculum Committee |
| Member | Graduate Curriculum Committee |
| Member | AMS Annual Meeting Travel Committee |
| Member | Department Computer Committee |
| Member | Department Father McElwane Evaluation Committee |
| Member | Department Publicity Committee |
| Member | University High Performance Computing Committee |
| Advisor | FSU WIMSE (Women in Math, Science, and Engineering) |

EDITORSHIPS

| | |
|-----------|--|
| 2006-2009 | Associate Editor, Monthly Weather Review |
|-----------|--|

JOURNAL & PROPOSAL REVIEWER

| | |
|-------|---|
| 2010- | Journal of Atmospheric Science |
| 2010 | Journal of Atmospheric and Oceanic Technology |
| 2009 | Nature Geoscience |
| 2009 | NOAA Proposals |
| 2009- | Quarterly Journal Royal Met. Society |

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| 2009 | Meteorology and Atmospheric Physics |
| 2007 | Climate Research |
| 2007- | Journal of Geophysical Research |
| 2007- | Geophysical Research Letters |
| 2006- | Bulletin of the American Meteorological Society |
| 2005- | National Science Foundation Proposals |
| 2005 | International Journal of Climatology |
| 2004 | Journal of Applied Meteorology |
| 2003 | Meteorologische Zeitschrift |
| 2002 | Atmosphere-Ocean |
| 2002- | Weather and Forecasting |
| 2000- | Journal of Climate |
| 1999- | Monthly Weather Review |
| 1999-2002 | Earth and Sky |

GRADUATES, Theses and current positions

- 2011(PhD) Ryglicki, David, "The Evolution of Barotropically Unstable, High-Rossby Number Vortices In Shear." SMART Postdoc, FNMOC, Monterey, CA.
- 2011(MS) Truchelut, Ryan, "Quantifying the possible existence of undocumented Atlantic warm-core cyclones in NOAA/CIRES 20th Century Reanalysis data. " PhD student, Florida State University.
- 2011 (BS) Hazelton, Andrew, "Analysis of GFDL intensity forecasting performance for Gulf/Caribbean major hurricanes from 1998-2008." PhD Student, Florida State University.
- 2010 (BS) Cossuth, Joshua, "A Dvorak-based tropical cyclone genesis climatology and forecast scheme." PhD Student, Florida State University
- 2009 (MS) Murray, Andrew, "Improved short-term Atlantic hurricane intensity forecasts using reconnaissance-based core measurements." Instructor, Univ. South Alabama.
- 2009 (MS) Creighton, Glenn, "A spatial filter approach to determining the role of convection on the evolution of a mesoscale vortex." UCAR / AFWA, Omaha, Nebraska.
- 2009 (PhD) Evans, Clark, "The thermodynamic evolution of recurving tropical cyclone Bonnie (1998)." Assistant Professor, University of Wisconsin-Milwaukee.

- 2008 (MS) Bloemer, Matthew, "The Post-Landfall Decay of U.S. Tropical Cyclones: Climatology & Characteristics of Anomalous Decay." NWS Key West, Florida.
- 2008 (BS) Molina, Maria, "An analysis of the factors driving the motion of Hurricane Andrew (1992)." (Honors Thesis), Meteorologist, FoxNews, NY.
- 2008 (BS) Deal, Robert, "Climatology and trends in Atlantic recon reports as compared to best-track." (Honors Thesis), M.S. Candidate, Florida State University.
- 2007 (MS) Piech, David, "Atlantic reconnaissance vortex message climatology and composites and their use in characterizing eyewall cycles." Impact Weather, Houston, TX.
- 2007 (MS) Manning, Danielle, "The utility of the ERA40 CPS in Trend Diagnosis and North Atlantic Tropical Cyclone Reanalysis." National Weather Service, Slidell, LA.
- 2006 (MS) Durante, Andrew, "The development of forecast confidence measures using NCEP ensembles." Constellation Energy, Baltimore, MD.
- 2006 (MS) Evans, Clark, "Dynamics of the wind field expansion associated with extratropically Transitioning tropical cyclones." , Assistant Professor, Univ. Wisconsin-Milwaukee
- 2005 (MS) Watson, Michael, "A recalculation of MPI using upper-ocean depth-averaged temperatures: Climatology and Case Studies." Surfline-Wavetrack, Melbourne, FL.

CURRENT STUDENTS (with estimated defense year and thesis topic)

- | | |
|-------------------------------|---|
| 2014 (PhD) Truchelut, Ryan | Forensic determination of unknown historical TCs through downstream and upstream footprints |
| 2013 (MS) Day, Lindsey | Synoptic characteristics of confident but erroneous ensemble TC track forecasts |
| 2013 (MS) Hazelton, Andrew | Observations, significance, and prediction of hurricane eyewall tilt |
| 2013 (PhD) Cossuth, Joshua | Satellite-based hurricane intensity prediction |
| 2012 (MS) Helms, Chip | Evolution of vorticity during tropical cyclogenesis from field experiment composites |
| 2012 (PhD) Schenkel, Benjamin | Climate memory of tropical cyclones |
| 2012 (MS) Vickers, Grayum | Global tornado climatology and composites (co-advised with Prof. E. Chassignet) |

B.S. (Hons)/M.S./PhD. DISSERTATION COMMITTEE [Excluding major professor role]

| | | | |
|-----------------------|-------|-------------|-------------------------------|
| Aarolyn Hayes | M.S. | Meteorology | Florida State University |
| Adam O'Shay | Ph.D. | Meteorology | Florida State University |
| Amanda Hopkins | Ph.D. | Meteorology | Florida State University |
| Andrew Kimball | M.S. | Meteorology | Florida State University |
| Andrew Latto | M.S. | Meteorology | Florida State University |
| Andrew Martin | M.S. | Meteorology | Florida State University |
| Andrew Martin | Ph.D. | Meteorology | Florida State University |
| Ashlee Hicks | M.S. | Meteorology | Florida State University |
| Benjamin Schenkel | M.S. | Meteorology | Florida State University |
| Brian Jackson | M.S. | Meteorology | Florida State University |
| Bruce Veenhuis | M.S. | Meteorology | Florida State University |
| Chris Morrow | M.S. | Meteorology | Florida State University |
| Christina Collier | M.S. | Meteorology | Florida State University |
| Daniel Halperin | M.S. | Meteorology | Florida State University |
| Dante Diaz | M.S. | Meteorology | Florida State University |
| David Rock | M.S. | Meteorology | Florida State University |
| David Ryglicki | M.S. | Meteorology | Florida State University |
| Derrick Weitlich | M.S. | Meteorology | Florida State University |
| Donald Van Dyke | M.S. | Meteorology | Florida State University |
| Donald Van Dyke | Ph.D. | Meteorology | Florida State University |
| Elizabeth Minter | Ph.D. | Meteorology | Florida State University |
| Emily Fogarty | Ph.D. | Geography | Florida State University |
| Geoffrey Stano | Ph.D. | Meteorology | Florida State University |
| Gloria Arrocha | M.S. | Meteorology | Florida State University |
| Haidao Lin | Ph.D. | Meteorology | Florida State University |
| Heather Holbach | B.S. | Meteorology | Florida State University |
| Heather Szymczak | M.S. | Meteorology | Florida State University |
| Henry Winterbottom | Ph.D. | Meteorology | Florida State University |
| Holly Anderson | M.S. | Meteorology | Florida State University |
| Jeff Wood | M.S. | Geography | Florida State University |
| Jeffrey Baum | Ph.D. | Meteorology | Florida State University |
| Jeremy Ross | Ph.D. | Meteorology | Pennsylvania State University |
| Jessica Fieux | M.S. | Meteorology | Florida State University |
| Jim Waller | M.S. | Meteorology | Florida State University |
| Jordanna Sheermohamed | M.S. | Meteorology | Florida State University |
| Julie Lesko | M.S. | Meteorology | Florida State University |
| Justin Arnott | Ph.D. | Meteorology | Pennsylvania State University |
| Kathleen Kulgren | M.S. | Meteorology | Florida State University |
| Kelsey Scheitlin | Ph.D. | Geography | Florida State University |

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|--------------------|-------|-------------|-------------------------------|
| LaTricia White | M.S. | Meteorology | Florida State Univeristy |
| Lawrence Pologne | M.S. | Meteorology | Florida State University |
| Leela Ramaswamy | Ph.D. | Meteorology | Florida State University |
| Luke Peffers | Ph.D. | Meteorology | Florida State University |
| Mark Guishard | Ph.D. | Meteorology | Pennsylvania State University |
| Mark Yorsaner | M.S. | Meteorology | Florida State University |
| Matthew Carrier | Ph.D. | Meteorology | Florida State University |
| Matthew Onderlinde | M.S. | Meteorology | Florida State University |
| Melanie Kramer | M.S. | Meteorology | Florida State University |
| Michael Jordan | Ph.D. | Meteorology | Florida State University |
| Michael Lowry | M.S. | Meteorology | Florida State University |
| Michelle Stewart | M.S. | Meteorology | Florida State University |
| Peter Bogenshutz | M.S. | Meteorology | Florida State University |
| Phil Hayes | Ph.D. | Meteorology | Florida State University |
| Phil Shafer | Ph.D. | Meteorology | Florida State University |
| Qin Li | Ph.D. | Mathematics | Florida State University |
| Robert Deal | M.S. | Meteorology | Florida State University |
| Robert Hodges | Ph.D. | Geography | Florida State University |
| Ryan Maue | M.S. | Meteorology | Florida State University |
| Ryan Maue | Ph.D. | Meteorology | Florida State University |
| Scott Rudlosky | Ph.D. | Meteorology | Florida State University |
| Shane Young | M.S. | Meteorology | Florida State University |
| Stephen Guimond | M.S. | Meteorology | Florida State University |
| Stephen Guimond | Ph.D. | Meteorology | Florida State University |
| Tammy Lytek | M.S. | Meteorology | Florida State University |
| Timothy Sliwinski | B.S. | Meteorology | Florida State University |
| Travis Smith | Ph.D. | Meteorology | Florida State University |
| Xiao Chen | Ph.D. | Mathematics | Florida State University |
| Yang Jiao | Ph.D. | GFDI | Florida State University |
| Walter Sessions | M.S. | Meteorology | Florida State University |
| William Maxham | M.S. | Meteorology | Florida State University |

WIMSE (Women in Math, Science and Engineering) Student Mentoring

Susan Bilis

Rachel Durham

Kelsie Timpe

PUBLICATIONS

BOOK AND BOOK CHAPTERS

1. Evans, J.E. and **R. E. Hart**, 2006: "Extratropical Transition of tropical cyclones". Atmosphere-Ocean Interaction. Wessex Institute of Technology. Ed: William Perrie.

PEER-REVIEWED JOURNAL PUBLICATIONS (Underline is student)

1. Schenkel, B. and **R. E. Hart**, 2012: An examination of tropical cyclone position and intensity differences within atmospheric reanalysis datasets. *J. Climate, MERRA Special Collection, in press. doi: 10.1175/2011JCLI4208.1.*
2. Schenkel, B. and **R. Hart**, 2011: Conference Notebook: Potential Precursors to Tropical Cyclone Passage. Bull. Amer. Meteor. Soc., October 2011, 1282-1283.
3. Truchelut, R.E. and **R.E. Hart**, 2011: Quantifying the possible existence of undocumented Atlantic warm-core cyclones in NOAA/CIRES 20th Century Reanalysis Data. *Geo. Res. Let.*, 38, L08811, doi:10.1029/2011GL046756.
4. **Hart, R.E.**, 2010: An inverse relationship between aggregate northern hemisphere tropical cyclone activity and subsequent winter climate. *Geo. Res. Let.*, doi:10.1029/2010GL045612.
5. Guishard, M.P., J. L. Evans, **R.E. Hart**, 2009: Atlantic Subtropical Storms. Part II: Climatology. *J. Climate*, 22, 3574-3594.
6. Junker, N.W, Richard. H. Grumm, **R. E. Hart**, L.F. Bosart, K. M. Bell, and Frank J. Pereira, 2008: Use of anomalous fields to anticipate extreme rainfall in the mountains of northern California. *Wea. And Forecasting*, 23, 336-356.
7. Evans, C. and **R.E. Hart**, 2008: Analysis of the wind field evolution associated with the extratropical transition of Bonnie (1998). *Mon. Wea. Rev.*, 136, 2047-2065.
8. **Hart, R.E.**, R. Maue, and M. Watson, 2007: Estimating the atmospheric and SST memory of tropical cyclones through MPI anomaly evolution. *Mon. Wea. Rev.*, 135, 3990-4005.
9. Maue, R. and **R. E. Hart**, 2007: Comment on "Low frequency variability in globally integrated tropical cyclone power dissipation." *Geo. Res. Let.*, 34, L11703, doi:1029/2006GL028283.

10. Manning, D. and **R. E. Hart**, 2007: Evolution of North Atlantic ERA40 Tropical Cyclone Representation. *Geo. Res. Let.*, 34, L05705, doi:10.1029/2006GL028266.
11. Guishard, M.P., E. A. Nelson, J. L. Evans, **R. E. Hart**, and D. G. O'Connell, 2007: Bermuda subtropical storms. *Meteor. And Atmos. Phys.*, doi: 10.1007/s00703-006-0255-y.
12. **Hart, R.**, J. L. Evans, and C. Evans, 2006: Synoptic Composites of the Extratropical Transition Lifecycle of North Atlantic Tropical Cyclones: Factors Determining Post-Transition Evolution. *Mon. Wea. Rev.*, 134, 553-578.
13. **Hart, R.**, 2003: A cyclone phase space derived from thermal wind and thermal asymmetry. *Mon. Wea. Rev.*, 131, 585-616.
14. Evans, J.L. and **R. Hart**, 2003: Objective indicators of the extratropical transition lifecycle of Atlantic tropical cyclones. *Mon. Wea. Rev.*, 131, 909-925.
15. Jones, S.C., P.A. Harr, J. Abraham, L.F. Bosart, P.J. Bowyer, J.L. Evans, D. E. Hanley, B. N. Hanstrum, **R.E. Hart**, F. Lalaurette, M.R. Sinclair, R.K. Smith, and C. Thorncroft, 2003: The extratropical transition of tropical cyclones: Forecast challenges, current understanding, and future directions. *Wea. Forecasting*, 18, 1052-1092.
16. Grumm, R. H. and **R. Hart**, 2001: Standardized Anomalies Applied to Significant Cold Season Weather Events: Preliminary Findings *Wea. Forecasting*, 16, 736-754.
17. **Hart, R.** and R.H. Grumm, 2001: Using normalized climatological anomalies to objectively rank extreme synoptic-scale events. *Mon. Wea. Rev.*, 129, 2426-2442.
18. **Hart, R.** and J.L. Evans, 2001: A climatology of the extratropical transition of Atlantic tropical cyclones. *J. Climate*, 14, 546-564.
19. **Hart, R.E.**, and G. S. Forbes, 1999: The use of hourly model-generated soundings to forecast mesoscale phenomena: Part II: Forecasting non-convective strong wind gusts. *Wea and Forec.*, 14, 461-469.
20. **Hart, R.**, and J.L. Evans, 1999: Simulations of dual-vortex interaction within Environmental Shear. *J. Atm. Science.*, 56, 3605-3621.
21. **Hart, R.E.**, G. S. Forbes, and R. H. Grumm, 1998: The use of hourly model-generated soundings to forecast mesoscale phenomena: Part I: Forecasting warm-season phenomena. *Wea and Forecasting*, 13, 1165-1185.

OTHER PEER-REVIEWED PUBLICATIONS

1. **Hart, R.**, 2005: "Hurricanes: A Primer on Formation, Structure, Intensity Change, and Frequency. Ed: Jeff Kueter. Marshall Institute. 20pp.

PUBLICATIONS IN PREPARATION OR REVIEW (Underline is student)

1. **Hart, R.E.**, 2012: The impact of dissipation on tropical cyclone verification statistics. *Wea. Fore.*, in preparation.
 2. **Hart, R.E.**, 2012: Simulations of the 1938 New England Hurricane using 20th Century Reanalysis. *Mon. Wea. Rev.*, in preparation.
 3. Creighton, G.A., **R.E. Hart**, and P. Cunningham, 2012: A spatial filter approach to determining the role of convection on the evolution of a mesoscale vortex. *J. Atm. Sci.*, in preparation.
 4. Cossuth, J., R. Knabb, D. Brown, and **R. E. Hart**, 2012: Tropical cyclone genesis guidance using pre-development Dvorak climatology. *Wea. and Forec.*, in preparation.
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GRANTS

CURRENT GRANTS

Fuelberg, H. and **R. E. Hart**, "Determining the Abilities of Operational Numerical Models to Forecast Tropical Cyclogenesis." COMET Partners Project. 11/2011-10/2012. \$11,880.

Hart, R., E. Chassignet, J. Collins, X. Xiao, and R. Weisburg, "Tackling Florida's Growing Geophysical Threats through Collaborative Coupled Modeling." SUS New Florida Initiative, 12/2010-12/2012. \$400,000 (\$200,000 external).

Hart, R.E., "Refining historical US Landfalling Hurricane Evolution Using WRF Simulations initialized with 20th Century Reanalysis." Risk Prediction Initiative/Bermuda Institute for Oceanic Sciences, 06/2010-08/2011, \$55,151.

Hart, R. and H. Fuelberg, “Improved Climatologies and Forecasting of Hurricane Landfall and Hurricane-Produced Tornado Risk to Florida.” Florida Catastrophic Storm Risk Management Center, 2/2010-6/2011. \$54,512.

Hart, R., “Quantifying the spatial and temporal extent of the memory of tropical cyclones.” NSF, 12/2009 – 12/2013. \$430,221.

Hart, R. and H. Fuelberg, “Breaking through the barrier of short-term hurricane intensity forecasting by interrogating remotely-sensed and reconnaissance datasets to predict core evolution.” NASA, 12/2008-11/2012. \$599,994

PAST GRANTS

Hart, R., and P. Reasor, H. Fuelberg, “Improved Analysis And Understanding Of The Meteorology Underlying The Various Components Of The Hurricane Risk Problem.” Florida Catastrophic Storm Risk Management Center, 12/2008 – 12/2009. \$163,043.

Hart, R. “Extending the TC track database to TC dissipation and its use in regional climatological landfall probabilities.” Bermuda Institute for Oceanic Sciences / Risk Prediction Initiative. 07/2008-7/2009. \$46,762.

Hart, R. “FSU CRC Travel Grant.” FSU, August 2008. \$450

Hart, R. “Optimizing the winter climate-TC relationship through sensitivity testing of aggregate tropical cyclone activity measures.” Bermuda Institute for Oceanic Sciences / Risk Prediction Initiative. 08/2008-12/2008. \$12,065

Hart, R. “Hemispheric recurving tropical cyclone frequency as a potential indicator of subsequent North Atlantic winter severity.” Bermuda Biological Station for Research/ Risk Prediction Initiative, 1 August 2007 – 31 July 2008. \$40,021

Fuelberg, H. and **R. Hart**, “Determining surface winds from Doppler radar data during Hurricanes affecting the FPL Service area.” Florida Power and Light. 1 January - 31 December 2007. \$83,468

Hart, R., “The development of anomalous probability forecasts for the threat of higher latitude hurricane impacts.” Bermuda Biological Station for Research / Risk Prediction Initiative, 1 August 2006 – 31 July 2007. \$26,000

Hart, R. SGER: “Significance Testing of the Role of Recurring Tropical Cyclones in Subsequent Winter Climate Modulation.” NSF, 1 June 2006-31 May 2007. \$23,836.

Hart, R. “FSU CRC Travel Grant.” FSU, August 2005. \$450

Landsea, C., **R. Hart**, D. Roth, and A. Solow: “A reanalysis and testing of trends in tropical cyclone data during the aircraft reconnaissance and satellite era.” NOAA OGP, 1 August 2005 – 31 July 2007. \$100,079 (Hart component)

Hart, R. and I. Watson, “The development of forecast confidence measures using NCEP ensembles and their real-time implementation within NWS web-based graphical forecasts”, University Corporation for Atmospheric Research COMET/National Weather Service (NWS) Cooperative Project. 1 June 2004 – May 31 2007. \$119,190

Hart, R. \$39,497: “An examination of the relationship between climate indices and tropical cyclone frequency and intensity.” Bermuda Biological Station for Research / Risk Prediction Initiative, 1 January 2005 – 31 December 2005. \$39,497

Hart, R., “A statistical-physical model as the foundation for a conceptual model for wind field evolution in extratropically transitioning tropical cyclones.” Florida State University First Year Assistant Professor Program (FYAP). 7 May 2004 - 9 August 2004. \$13,000

TEACHING

INVITED LABS/SEMINARS

| | |
|-----------|---|
| 2003-2010 | COMET:NORLAT/Midlatitude Training: Cyclone phase space and extra. transition |
| 2005 | 3 rd International Workshop on Extratropical Transition: Cyclone phase space |
| 2003 | 2 nd International Workshop on Extratropical Transition: Cyclone phase space |
| 2000 | Binghamton NWS Office Winter Weather Workshop: Ensembling |
| 1995 | Pennsylvania State University: GrADS laboratory |

COURSES TAUGHT

| | | | |
|---------|-------------------|-------------------------|--------------------------|
| Met2101 | Undergraduate | Physical Climatology | Florida State University |
| Met2700 | Undergraduate | General Meteorology | Florida State University |
| Met6561 | Advanced Graduate | Advanced Hurricanes | Florida State University |
| Met4500 | Undergraduate | Synoptic Meteorology I | Florida State University |
| Met4501 | Undergraduate | Synoptic Meteorology II | Florida State University |
| Met5534 | Graduate | Tropical Meteorology II | Florida State University |
| Met4159 | Undergraduate | Competitive Prediction | Florida State University |

WEB PAGE DEVELOPMENT (Asterisk is research-funded)

| | | |
|------|---|--|
| 2010 | Hurricane genesis probabilities | moe.met.fsu.edu/genesis * |
| 2009 | Hurricane landfall risk | moe.met.fsu.edu/tcprob * |
| 2007 | Real-time mesoscale fire condition modeling | moe.met.fsu.edu/fire/mm5 * |
| 2007 | Real-time global weather extremes | coolwx.com/extreme |
| 2007 | Real-time record occurrence by year | moe.met.fsu.edu/recyear |
| 2007 | FSU 5 th Floor Map Room | moe.met.fsu.edu/maproom |
| 2006 | Real-time and historical snowcover statistics | moe.met.fsu.edu/snow * |
| 2005 | Real-time hurricane modeling | moe.met.fsu.edu/mm5 |
| 2005 | GFS Forecasts for anywhere on Earth | coolwx.com/globe |
| 2004 | Ensemble-based forecast confidence measures | moe.met.fsu.edu/confidence * |
| 2002 | Mesoscale precipitation banding diagnostics | moe.met.fsu.edu/banding |
| 2001 | Cyclone phase diagnostics and forecasts | moe.met.fsu.edu/cyclonephase |
| 2000 | Atmospheric rarity: historical and forecast | eyewall.met.psu.edu/ranking |
| 1998 | Tropical cyclone genesis fields | moe.met.fsu.edu/tcgengifs |
| 1999 | NCEP Precipitation type forecasts | coolwx.com/ptype |
| 1999 | NCEP Ensemble MOS Graphics | eyewall.met.psu.edu/mos * |
| 1999 | NWP Ensemble output and comparison | eyewall.met.psu.edu * |

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| 1999 | Normalized departures from climatology | eyewall.met.psu.edu* |
| 1996 | Hourly model time-series forecasts | coolwx.com/modelts* |
| 1996 | North American Mesoscale analyses | coolwx.com/analysis |
| 1995 | Hourly U.S. Weather Statistics | coolwx.com/usstats |
| 1994 | Decoded offshore weather data | coolwx.com/buoydata |
| 1994 | Internet user weather observations | coolwx.com/userobs |

SOFTWARE DEVELOPMENT (see website for downloads)

| | |
|-----------|--|
| 2007-2008 | GFDL/GFS compositing software for global TC merger and model init. |
| 2003-2004 | GrADS compositing function |
| 2001 | NCAR/NCEP Reanalysis-based MM5 initialization routines |
| 2001 | Cyclone phase diagnostics software |
| 2001 | GrADS-based cyclone tracker |
| 1999 | GrADS isentropic, isobaric, and height interpolators |
| 1999 | Matlab resonant mountain wave simulator |
| 1997 | GrADS Legend function |
| 1996-2009 | GrADS SkewT/LogP function |

CONSULTING

| | |
|-----------|---|
| 2009 | Paine PR / Duracell |
| 2008-2010 | Risk Management Solutions (London, England) |
| 2008 | State Farm Insurance |
| 2007-2008 | Risk Management Solutions (Newark, CA) |
| 2005-2006 | South Carolina Department of Insurance |
| 2006 | George Marshall Institute |
| 2002 | WTNH-TV New Haven, CT (Volunteer) |
| 2000 | Environmental Technologies Group (Reston, VA) |
| 1998 | General Re Reinsurance (Hartford, CT) |
| 1997 | Pennsylvania Academy of Science |

SEMINARS AND TALKS

INVITED (Underline is international)

| | | |
|------|-------------------------------|---|
| 2011 | Miami, FL | Univ. Miami RSMAS Departmental Seminar |
| 2011 | <u>Bermuda</u> | Bermuda Institute for Oceanic Sciences |
| 2011 | <u>Rhodes, Greece</u> | 3 rd Summit on Hurricanes and Climate Change |
| 2011 | Newark, DE | Univ. of Delaware Seminar |
| 2011 | College Station, TX | Texas A&M Seminar |
| 2011 | Mobile, AL | Univ. S. Alabama SeCAPS Conference |
| 2011 | Albany, NY | Univ. at Albany Seminar |
| 2010 | <u>La Reunion, France</u> | 7 th International Workshop on Tropical Cyclones |
| 2010 | Baltimore, MD | WCRP Reanalysis Conference |
| 2010 | Boulder, CO | UCAR NORLAT Training Lab |
| 2010 | <u>Bermuda</u> | Bermuda Institute for Oceanic Sciences |
| 2010 | Madison, WI | Univ. Wisconsin (Madison) Seminar |
| 2010 | New York, NY | Columbia Univ. Seminar |
| 2010 | <u>Bermuda</u> | 32nd meeting of the WMO Hurricane Committee |
| 2010 | Portland, OR | Ocean Science AGU Meeting |
| 2009 | Albany, NY | Univ. at Albany Seminar |
| 2009 | Cambridge, MA | Mass. Institute of Technology MASS Seminar |
| 2009 | Boulder, CO | UCAR NORLAT Training Lab |
| 2009 | <u>Bermuda</u> | Bermuda Institute for Oceanic Sciences |
| 2009 | Arlington, VA | 2009 Scatterometry and Climate Meeting |
| 2009 | <u>Corfu, Greece</u> | 2 nd International Summit on Hurricanes and Climate Change |
| 2008 | San Francisco, CA | Fall Meeting of AGU |
| 2008 | Boulder, CO | UCAR NORLAT Training Lab |
| 2008 | <u>Rio de Janeiro, Brazil</u> | Southern Hemisphere Cyclone Conference |
| 2008 | <u>Tsukuba, Japan</u> | MRI: Meteorological Research Institute |
| 2008 | <u>Komaba, Japan</u> | 3 rd International Conference on Reanalysis |
| 2007 | Tallahassee, FL | FSU Department of Physics |
| 2007 | Tallahassee, FL | North Florida Local Chapter American Meteorology Society |
| 2007 | Boulder, CO | UCAR NORLAT Training Lab |
| 2007 | <u>Crete</u> | 1 st International Summit on Hurricanes and Climate Change |
| 2007 | State College, PA | Penn State Department of Meteorology Seminar |
| 2006 | Milton, MA | NWS Taunton S. New England Winter Weather Workshop |
| 2006 | Boulder, CO | UCAR NORLAT Training Lab |
| 2006 | Mobile, AL | Univ. of South Alabama SeCAPS Conference |
| 2005 | <u>Perth, Australia</u> | 3 rd International Conference on Extratropical Transition |
| 2005 | <u>Bermuda</u> | Bermuda Biological Station for Research |
| 2004 | State College, PA | Penn State Department of Meteorology Seminar |

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| 2003 | <u>Halifax, NS</u> | 2 nd International Conference on Extratropical Transition |
| 2003 | Boulder, CO | UCAR NORLAT Training Lab |
| 2003 | Tallahassee, FL | North Florida Local Chapter American Meteorology Society |
| 2003 | State College, PA | Pennsylvania State University Meteorology Class Lecture |
| 2003 | Raleigh, NC | Mid-Atlantic AMS Regional Hurricane Conference |
| 2003 | Miami, FL | University of Miami Departmental Seminar |
| 2003 | Miami, FL | National Hurricane Center |
| 2003 | Tallahassee, FL | Florida State University Departmental Seminar |
| 2003 | Silver Springs, MD | NOAA/EMC Seminar |
| 2002 | Tallahassee, FL | Florida State University Departmental Seminar |
| 2002 | West Lafayette, IN | Purdue University Departmental Seminar |
| 2001 | State College, PA | NRC Committee on Partnerships in Weather and Climate |
| 2000 | Binghamton, NY | NWS Winter Weather Workshop |
| 1999 | <u>Bermuda</u> | Bermuda Biological Station for Research |

ALL PRESENTATIONS & CONFERENCE PROCEEDINGS

Listing available upon request