

Jenni L. Evans

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CURRENT PROFESSIONAL APPOINTMENTS

Professional Team Hurricane Meteorologist, 2022 – present

Professional Team Flood Meteorologist, 2022 – present

Florida Commission for Hurricane Loss Projection Methodology

Florida State Board of Administration

Director, Penn State Institute for Computational & Data Sciences (ICDS), 2019 – present

Office of the Senior Vice President for Research

The Pennsylvania State University

Tenured Full Professor, 2005 – present

Department of Meteorology & Atmospheric Science / Earth & Environmental Systems Institute

The Pennsylvania State University

PRIOR PROFESSIONAL APPOINTMENTS

Hurricane Meteorologist,

Hurricane Catastrophe Model Evaluation Team, 2020 – 2021

Hawaii Insurance Division, Department of Commerce and Consumer Affairs,

Centennial President (elected), American Meteorological Society, 2019 – 2020

Director, Penn State Institute for CyberScience (ICS), 2017 – 2019

Office of the Vice President for Research, The Pennsylvania State University

President-Elect, American Meteorological Society, 2018

Professional Team Backup Hurricane Meteorologist, 2017 – 2021

Professional Team Backup Flood Meteorologist, 2015 – 2021

Florida Commission for Hurricane Loss Projection Methodology

Florida State Board of Administration

Prior Professional Appointments (continued)

Professional Team Lead Meteorologist, 2004 – 2017

Florida Commission for Hurricane Loss Projection Methodology
Florida State Board of Administration

Interim Director, Penn State Institute for CyberScience (ICS), 2016

Office of the Vice President for Research, The Pennsylvania State University

Acting Director, Penn State Institutes of Energy and the Environment, 2014 – 2015

Office of the Vice President for Research, The Pennsylvania State University

Interim Director, Earth and Environmental Systems Institute, 2013

College of Earth and Mineral Sciences, The Pennsylvania State University

Consulting Meteorologist, 2013

Division of Actuarial and Market Services, South Carolina Department of
Insurance

Consulting Meteorologist, 2011

Maryland State Government Insurance Administration

Visiting Scientist, 2007 – 2008

Bureau of Meteorology Research Centre, Melbourne, Australia

Professional Team Backup Meteorologist, 2003

Florida Commission for Hurricane Loss Projection Methodology
Florida State Board of Administration

Tenured Associate Professor, 1998 – 2005

Department of Meteorology and EESI, The Pennsylvania State University

Assistant Professor, 1992 – 1998

Department of Meteorology and EESI, The Pennsylvania State University
National Science Foundation CAREER Grant [1996]

Research Scientist, Commonwealth Scientific & Industrial Research Organisation, 1990–1992

CSIRO Division of Atmospheric Research
Melbourne, Australia

Visiting Scientist, Naval Postgraduate School, 1987 – 1989

Department of Meteorology, College of Engineering,
Monterey CA

Research Assistant [fluid dynamics laboratory], 1985 – 1987

Department of Mathematics, College of Science,
Monash University, Melbourne, Australia

Prior Professional Appointments (continued)

Research Assistant [atmospheric boundary layer laboratory], 1984 – 1985

Department of Mechanical Engineering, College of Engineering,
Monash University, Australia

ACADEMIC AND PROFESSIONAL QUALIFICATIONS

High Performance Leadership, Oxford University [May 2017]

Ph. D., Applied Mathematics, Monash University [1990]

B. Sc. (Honours) Applied Mathematics, Monash University [1984]

HONORS AND AWARDS

- Monash Fellow, Monash University, Australia [2021; University award]
- Finalist (of 3 Australia-wide), Advance Australia Sustainability Award [2020]
- Featured in Monash Life [2020]
- Centennial President (elected), American Meteorological Society (AMS) [2019/20]
- Fellow, American Association for the Advancement of Science (AAAS) [2019]
- Editors Award, Eos, American Geophysical Union (AGU) [2013]
- Fellow, American Meteorological Society [2010]
- Councilor (elected), American Meteorological Society [2005 – 2008]
- NSF CAREER Grant [1996]

PROFESSIONAL SOCIETIES

- American Meteorological Society (AMS), Fellow, Past President
- American Association for the Advancement of Science (AAAS), Fellow
- Coalition for Academic Scientific Computation (CASC)
- Association for Computing Machinery (ACM)
- American Geophysical Union (AGU)
- Australian Meteorological and Oceanographic Society (AMOS)
- Chi Epsilon Pi [XEPi] Meteorological Honor Society

RESEARCH INTERESTS

My research is organized around the themes of tropical cyclones, tropical convection and climate change. I am one of a small group of scientists who recognized and developed the research area of Extratropical Transition (ET) of tropical cyclones (TCs) – most of these scientists are co-authors on the Jones et al. (2003) paper listed below. The

current generation of ET researchers contributed to a recent paper updating the state of understanding of ET (Keller et al. 2018).

I have also been instrumental in bringing together a core group of scientists – drawn from nine countries and spanning climate, social, mathematical and biological sciences – to explore climate change impacts for key societal questions.

Thematic research areas: tropical cyclones [TC]/hurricanes, organized tropical convection (mesoscale convective systems); TC response to climate change; downscaling of climate change impacts relating to security of water, food and energy; physically-based synthesis of ensemble forecasts; physical evolution of tropical cyclones through extratropical transition [ET]; subtropical cyclones; tropical cyclogenesis; African Easterly Waves; statistical assessment of hurricane risk.

Tools employed: dynamical numerical simulations; machine learning and statistical techniques new to meteorology (point and path clustering, dimension reduction); ensemble prediction and analysis relating to TCs and African climate; analysis and downscaling of climate model simulations; satellite data analysis; field experiments.

Impact on TC forecasting: My research group developed the Cyclone Phase Space [CPS] framework to represent the temporal evolution of the 3-dimensional TC structure. Since its publication in 2003, the CPS has become a standard tool in operational TC forecasting for the U.S. and Canadian National Hurricane Centers. It is also used by forecasters at the U.S. Air Force Weather Squadron, the Joint (U.S. Navy/Air Force) Typhoon Warning Center, the Australian Bureau of Meteorology and Japanese Meteorological Agency.

ADMINISTRATION OF ADVANCED COMPUTATIONAL SYSTEMS

My role as ICDS Director includes overseeing advancement of state-of-the-science research compute capabilities. From 2016-2018 we designed and implemented a new, advanced High Performance Computing (HPC) system with capabilities placing it in the top 15 academic HPC facilities. The end-to-end treatment of data, and development of collaborative HPC capabilities across multiple institutions are challenges we are currently addressing.

In 2019 we implemented an internal cloud capability and in 2020 we expanded our multi-institution collaborations (ERN Monash), research initiative support and development (RISE), and our industry partnerships. High-level priorities for research initiatives in 2021 are Artificial Intelligence and Machine Learning (AI/ML), complex visualization, quantum information science, and advanced research infrastructure.

PUBLISHED WORKS

Refereed Journal Articles

Student co-authors: graduate students or postdocs for whom I am/was major advisor for the published research; *all other students* (graduate committees or undergraduate advisees).

1. Polasky, Andrew, **Jenni L. Evans**, Jose Fuentes, and Holly L. Hamilton, 2021: Statistical climate model downscaling for impact projections in the Midwest United States. *International Journal of Climatology*, 1–18. <https://doi.org/10.1002/joc.7406>.
2. Núñez Ocasio, Kelly M., Alan Brammer; **Jenni L. Evans**; George S. Young, and Zachary Moon, 2021: Favorable monsoon environment over eastern Africa for subsequent tropical cyclogenesis of African easterly waves. *Journal of the Atmospheric Sciences*, **78**, 2911-2925. <https://doi.org/10.1175/JAS-D-20-0339.1>.
3. Núñez Ocasio, K. M., **Jenni L. Evans**, and G. S. Young, 2021: A wave-relative framework analysis of AEW-MCS interactions leading to tropical cyclogenesis. *Monthly Weather Review*, **148**, 4657-4671. <https://doi.org/10.1175/MWR-D-20-0152.1>.
4. Kowaleski, Alex M., and **Jenni L. Evans**, 2020: Use of multi-ensemble track clustering to inform medium-range tropical cyclone forecasts. *Weather and Forecasting*, **35**, 1407-1426. <https://doi.org/10.1175/WAF-D-20-0003.1>.
5. Hamilton, Holly L., Kelly M. Núñez Ocasio, George S. Young, **Jenni L. Evans**, and Jose D. Fuentes, 2020: Topographic influence on the African Easterly Jet and African Easterly Wave energetics. *J. Geophysical Research (Atmospheres)* **125**, e2019JD032138. <https://doi.org/10.1029/2019JD032138>
6. McKenna, Anne T., Amy Gaudion, and **Jenni L. Evans**, 2019: The role of satellites and smart devices: Data surprises and security, privacy and regulatory challenges. *Penn State Law Review*, **123** (3), 591-665, <https://ideas.dickinsonlaw.psu.edu/cgi/viewcontent.cgi?article=1023&context=fac-works>.
7. Bieli, Melanie, Suzana J. Camargo, Adam H. Sobel, **Jenni L. Evans**, and Timothy Hall, 2019a: A global climatology of Extratropical Transition Part I: Characteristics across basins. *Journal of Climate*, **32**, 3557–3582, doi:10.1175/JCLI-D-17-0518.1.

Refereed Journal Articles (continued)

8. Bieli, Melanie, Suzana J. Camargo, Adam H. Sobel, **Jenni L. Evans**, and Timothy Hall, 2019b: A global climatology of Extratropical Transition Part II: Statistical performance of the Cyclone Phase Space. *Journal of Climate*, **32**, 3583–3597, doi:10.1175/JCLI-D-18-0052.1.
9. Keller, J., C. Grams, M. Riemer, H. Archambault, L. Bosart, J. Doyle, **J. Evans**, T. Galarneau, K. Griffin, P. Harr, N. Kitabatake, R. McTaggart-Cowan, F. Pantillon, J. Quinting, C. Reynolds, E. Ritchie, R. Torn, and F. Zhang, 2019: The extratropical transition of tropical cyclones Part II: Interaction with the midlatitude flow, downstream impacts, and implications for predictability. *Monthly Weather Review* [Special Pandowae Collection], **147**, 1077–1106, doi:10.1175/MWR-D-17-0329.1.
10. Núñez Ocasio, Kelly M., **Jenni L. Evans**, and George S. Young, 2019: Tracking mesoscale convective systems that are potential candidates for tropical cyclogenesis. *Monthly Weather Review*, **148**, 655–669, <https://doi.org/10.1175/MWR-D-19-0070.1>
11. Kowaleski, Alex, and **Jenni L. Evans**, 2018: Relationship between the track and structural evolution of Hurricane Sandy (2012) using a regional ensemble. *Monthly Weather Review*, **146** (12), doi: <https://doi.org/10.1175/MWR-D-18-0121.1>.
12. González-Alemán, Juan Jesús, **Jenni L. Evans** and Alex Kowaleski, 2018: Synoptic factors affecting the structural evolution and predictability of Hurricane Alex (2016) in the midlatitudes. *Monthly Weather Review*, **146**, 3143–3162, doi: <https://doi.org/10.1175/MWR-D-18-0015.1>.
13. Hamilton, Holly L., George S. Young, **Jenni L. Evans**, Jose D. Fuentes and Kelly M. Núñez Ocasio, 2017: The relationship between the Guinea Highlands and the West African Offshore Rainfall Maximum. *Geophysical Research Letters*, **44**, 1158–1166, doi:10.1002/2016GL071170.
14. Kowaleski, Alex, and **Jenni L. Evans**, 2016a: A reformulation of tropical cyclone Potential Intensity theory incorporating energy production along a radial trajectory. *Monthly Weather Review*, **144**, 3569–3578, doi: 10.1175/MWR-D-15-0383.1.
15. Kowaleski, Alex, and **Jenni L. Evans**, 2016b: Regression mixture model clustering of multi-model ensemble forecasts of Hurricane Sandy: Partition characteristics. *Monthly Weather Review*, **144**, 3825–3846, doi: 10.1175/MWR-D-16-0099.1.

Refereed Journal Articles (continued)

16. *Kuruppumullage Don, Prabhani, Jenni L. Evans, Francesca Chiaromonte and Alex M. Kowaleski*, 2016: Mixture-based path clustering for synthesis of ECMWF ensemble forecasts of tropical cyclone evolution. *Monthly Weather Review*, **144**, 3301-3320, doi:10.1175/MWR-D-15-0214.1.
17. *Kowaleski, Alex, and Jenni L. Evans*, 2015: Thermodynamic observations and flux calculations of the tropical cyclone surface layer in the context of potential intensity. *Weather and Forecasting*, **30**, 1303-1320.
18. *González-Alemán, Juan Jesus, Francisco Valero, Francisco Martín-León, and Jenni L. Evans*, 2015: Classification and synoptic analysis of subtropical cyclones within the Northeastern Atlantic Ocean. *Journal of Climate*, **28**, 3331-3352, doi: 10.1175/JCLI-D-14-00276.1.
19. *Evans, Jenni L., and Casey C. Webster*, 2014: A variable sea surface temperature threshold for tropical convection. *Australian Meteorological and Oceanographic Journal*, **64**, S1-S8, http://www.bom.gov.au/amm/docs/2014/evans_hres.pdf.
20. *Kozar, Michael E., Michael E. Mann, Kerry A. Emanuel and Jenni L. Evans*, 2013: Long-term variations of North Atlantic tropical cyclone activity downscaled from a coupled model simulation of the last millennium. *Journal of Geophysical Research (Atmospheres)*, **118**, 13,383–13,392, doi: 10.1002/2013JD020380.
21. *Waters, Jeffrey J., Jenni L. Evans, and Chris E. Forest*, 2012: Large-scale diagnostics of tropical cyclogenesis potential using environment variability metrics and logistic regression models. *Journal of Climate*, **25**, 6092-6107, doi: <http://dx.doi.org/10.1175/JCLI-D-11-00359.1>.
22. *Kozar, Michael E., Michael E. Mann, Suzana J. Camargo, James P. Kossin and Jenni L. Evans*, 2012: Stratified statistical models of North Atlantic basin-wide and regional tropical cyclone counts. *Journal of Geophysical Research (Atmospheres)*, **117**, D18103. Data available at <https://www.datacommons.psu.edu/commonswizard/MetadataDisplay.aspx?Dataset=6301>
23. *Evans, Jenni L., and Jeffrey J. Waters*, 2012: Simulated relationships between sea surface temperatures and tropical convection in climate models and their implications for tropical cyclone activity. *Journal of Climate*, **25**, 7884–7895, doi: <http://dx.doi.org/10.1175/JCLI-D-11-00392.1>.
24. *Evans, Jenni L., and Aviva J. Braun*, 2012: A climatology of subtropical cyclones in the South Atlantic. *Journal of Climate*, **25**, 7328–7340, doi: <http://dx.doi.org/10.1175/JCLI-D-11-00212.1>.

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25. Fan, Fangxing, Michael E. Mann, Sukyoung Lee and **Jenni L. Evans**, 2012: Future changes in the South Asian Summer Monsoon: Analysis of the CMIP3 multimodel projections. *Journal of Climate*, **25**, 3909-3928, doi: <http://dx.doi.org/10.1175/JCLI-D-11-00133.1>.
26. Keller, Julia H., Sarah C. Jones, **Jenni L. Evans** and Patrick A. Harr, 2011: Characteristics of the TIGGE multimodel ensemble prediction system in representing forecast variability associated with extratropical transition. *Geophysical Research Letters*, **38**, L12802, doi: 10.1029/2011GL047275.
27. **Evans, Jenni L.**, Jose D Fuentes, Xiao-Ming Hu and Holly L. Hamilton, 2011: Earth-Atmosphere interactions: Tropical storm and hurricane activity in the Caribbean and their consequent health impacts. *J. Race and Policy Special Issue "Disaster Preparedness and Health Care: U. Va in St. Kitts and Nevis"*, **7** (1).
28. **Evans, Jenni L.**, 2010: Environmental impacts on tropical cyclone structure and intensity change. *Report to the World Meteorological Organisation (WMO) International Workshop on Tropical Cyclones (IWTC-VII)*, La Réunion, November 2010, J. Kepert and C. Velden (Eds).
29. Fan, Fangxing, Michael E. Mann, Sukyoung Lee and **Jenni L. Evans**, 2010: Observed and modeled changes in the South Asian Summer Monsoon over the historical period. *Journal of Climate*, **23**, 5193–5205, doi: <http://dx.doi.org/10.1175/2010JCLI3374.1>.
30. **Evans, Jenni L.**, and Mark P. Guishard, 2009: Atlantic Subtropical Storms. Part I: Diagnostic criteria and composite analysis. *Monthly Weather Review*, **137**, 2065–2080, doi: 10.1175/2009MWR2468.1.
31. Guishard, Mark P., **Jenni L. Evans**, and Robert E. Hart, 2009: Atlantic Subtropical Storms. Part II: Climatology. *Journal of Climate*, **22**, 3574–3594, doi: 10.1175/2008JCLI2346.1.
32. Veren, Daniel, **Jenni L. Evans**, Sarah C. Jones, and Francesca Chiaromonte, 2009: Novel metrics for evaluation of ensemble forecasts of tropical cyclone structure. *Monthly Weather Review*, **137**, 2830–2850, doi: 10.1175/2009MWR2655.1.
33. Pratt, Aaron, and **Jenni L. Evans**, 2009: Potential impacts of the Saharan Air Layer on numerical model forecasts of North Atlantic tropical cyclogenesis. *Weather and Forecasting*, **24**, 420–435, doi: 10.1175/2008WAF2007090.1.

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34. Moyer, Adam C., **Jenni L. Evans**, and Mark Powell, 2007: Comparison of observed gale radius statistics. *Meteorology and Atmospheric Physics*, **97**, 41-55, doi: 10.1007/s00703-006-0243-2.
35. Guishard, Mark P., Elizabeth A. Nelson, **Jenni L. Evans**, Robert E. Hart, and Dermott G. O'Connell, 2007: Bermuda subtropical storms. *Meteorology and Atmospheric Physics*, **97**, 239-253, doi: 10.1007/s00703-006-0255-y.
36. **Evans, Jenni L.**, Justin M. Arnott, and Francesca Chiaromonte, 2006: Evaluation of operational model cyclone structure forecasts during Extratropical Transition. *Monthly Weather Review*, **134**, 3054–3072, doi: <http://dx.doi.org/10.1175/MWR3236.1>.
37. Hart, Robert E., Clark Evans, and **Jenni L. Evans**, 2006: Synoptic composites of the extratropical transition lifecycle of North Atlantic tropical cyclones: Factors determining post-transition evolution. *Monthly Weather Review*, **134**, 553–578, doi: <http://dx.doi.org/10.1175/MWR3082.1>.
38. Arnott, Justin M., **Jenni L. Evans** and Francesca Chiaromonte, 2004: Characterization of extratropical transition using cluster analysis. *Monthly Weather Review*, **132**, 2916-2937, doi: <http://dx.doi.org/10.1175/MWR2836.1>.
39. **Evans, Jenni L.**, and Barbara Prater-Mayes, 2004: Factors affecting the post-transition intensification of Hurricane Irene (1999). *Monthly Weather Review*, **132**, 1355-1368, doi: [http://dx.doi.org/10.1175/1520-0493\(2004\)132<1355:FATPIO>2.0.CO;2](http://dx.doi.org/10.1175/1520-0493(2004)132<1355:FATPIO>2.0.CO;2).
40. Jones, Sarah C., Patrick A. Harr, Jim Abraham, Lance F. Bosart, Peter J. Bowyer, **Jenni L. Evans**, Deborah E. Hanley, Barry N. Hanstrum, Robert E. Hart, François Lalaurette, Mark R. Sinclair, Roger K. Smith, and Chris Thorncroft, 2003: The extratropical transition of tropical cyclones: Forecast challenges, current understanding, and future directions. *Weather and Forecasting*, **18**, 1052–1092, doi: [http://dx.doi.org/10.1175/1520-0434\(2003\)018<1052:TETOTC>2.0.CO;2](http://dx.doi.org/10.1175/1520-0434(2003)018<1052:TETOTC>2.0.CO;2).
41. **Evans, Jenni L.**, and Robert E. Hart, 2003: Objective indicators of the life cycle evolution of extratropical transition for Atlantic tropical cyclones. *Monthly Weather Review*, **131**, 909-925, doi: [http://dx.doi.org/10.1175/1520-0493\(2003\)131<0909:OIOTLC>2.0.CO;2](http://dx.doi.org/10.1175/1520-0493(2003)131<0909:OIOTLC>2.0.CO;2).
42. Tsakraklides, Giorgos, and **Jenni L. Evans**, 2003: Global and regional diurnal variations of organized convection. *Journal of Climate*, **16**, 1562–1572, doi: <http://dx.doi.org/10.1175/1520-0442-16.10.1562>.

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43. Chan, Steven, and **Jenni L. Evans**, 2002: Comparison of the structure of the ITCZ in the West Pacific during the boreal summers of 1989-1993 using AMIP simulations and ECMWF reanalysis. *Journal of Climate*, **15**, 3549-3568, doi: [http://dx.doi.org/10.1175/1520-0442\(2002\)015<3549:COTSOT>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(2002)015<3549:COTSOT>2.0.CO;2).
44. Kimball, Sytske K., and **Jenni L. Evans**, 2002: Idealized numerical simulations of hurricane-trough interaction. *Monthly Weather Review*, **130**, 2210-2227, doi: [http://dx.doi.org/10.1175/1520-0493\(2002\)130<2210:INSOHT>2.0.CO;2](http://dx.doi.org/10.1175/1520-0493(2002)130<2210:INSOHT>2.0.CO;2).
45. Prater, Barbara, and **Jenni L. Evans**, 2002: Sensitivity of modeled tropical cyclone track and structure of Hurricane Irene (1999) to the convection parameterization scheme. *Meteorology and Atmospheric Physics*, **80**, 103-115, doi: 10.1007/s007030200018.
46. **Evans, Jenni L.**, and Francine A. Jaskiewicz, 2001: Satellite-based monitoring of intraseasonal variations in tropical Pacific and Atlantic convection. *Geophysical Research Letters*, **28**, 1511-1514, doi: 10.1029/1999GL011259.
47. Hart, Robert E., and **Jenni L. Evans**, 2001: A climatology of extratropical transition of tropical cyclones in the North Atlantic. *Journal of Climate*, **14**, 546-564, doi: [http://dx.doi.org/10.1175/1520-0442\(2001\)014<0546:ACOTET>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(2001)014<0546:ACOTET>2.0.CO;2).
48. Easterling, D. R., **Jenni L. Evans**, P. Ya. Groisman, T. R. Karl, K. E. Kunkel, P. Ambenje, 2000: Observed variability and trends in extreme climate events: A brief review. *Bulletin of the American Meteorological Society*, **81**, 417-426, doi: [http://dx.doi.org/10.1175/1520-0477\(2000\)081<0417:OVATIE>2.3.CO;2](http://dx.doi.org/10.1175/1520-0477(2000)081<0417:OVATIE>2.3.CO;2).
49. Meehl, G. A., T. Karl, D. R. Easterling, S. Changnon, R. Pielke Jr., D. Changnon, **Jenni L. Evans**, P. Ya. Groisman, T. R. Knutson, K. E. Kunkel, L. O. Mearns, C. Parmesan, R. Pulwarty, T. Root, R. T. Sylves, P. Whetton, F. Zwiers, 2000a: An introduction to trends in extreme weather and climate events: Observations, socioeconomic impacts, terrestrial ecological impacts, and model projections. *Bulletin of the American Meteorological Society*, **81**, 413-416, doi: [http://dx.doi.org/10.1175/1520-0477\(2000\)081<0413:AITTIE>2.3.CO;2](http://dx.doi.org/10.1175/1520-0477(2000)081<0413:AITTIE>2.3.CO;2).
50. Meehl, G. A., F. Zwiers, **Jenni L. Evans**, T. Knutson, L. Mearns, P. Whetton, 2000b: Trends in extreme weather and climate events: Issues related to modeling extremes in projections of future climate change. *Bulletin of the American Meteorological Society*, **81**, 427-436, doi: [http://dx.doi.org/10.1175/1520-0477\(2000\)081<0427:TIEWAC>2.3.CO;2](http://dx.doi.org/10.1175/1520-0477(2000)081<0427:TIEWAC>2.3.CO;2).

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51. Dutton, Jan F., Christopher J. Poulsen, and **Jenni L. Evans**, 2000: The effect of global climate change on the regions of tropical convection in CSM1. *Geophysical Research Letters*, **27**, 3049-3050, doi: 10.1029/2000GL011542.
52. Hart, Robert E., and **Jenni L. Evans**, 1999: Simulations of dual vortex interaction within environmental shear. *Journal of the Atmospheric Sciences*, **56**, 3605-3621, doi: [http://dx.doi.org/10.1175/1520-0469\(1999\)056<3605:SODVIW>2.0.CO;2](http://dx.doi.org/10.1175/1520-0469(1999)056<3605:SODVIW>2.0.CO;2).
53. **Evans, Jenni L.**, and Kathleen McKinley, 1998: Relative timing of tropical storm lifetime maximum intensity and track recurvature. *Meteorology and Atmospheric Physics*, **65**, 241-245, doi: 10.1007/BF01030792.
54. Barros, Ana P., and **Jenni L. Evans**, 1997: Designing for climate variability. *Journal of Professional Issues in Engineering*, **123**, 62-65, doi: [http://dx.doi.org/10.1061/\(ASCE\)1052-3928\(1997\)123:2\(62\)](http://dx.doi.org/10.1061/(ASCE)1052-3928(1997)123:2(62)).
55. **Evans, Jenni L.**, and Robert E. Shemo, 1996: A procedure for automated satellite-based identification and climatology development of various classes of organized convection. *Journal of Applied Meteorology*, **35**, 638-652, doi: [http://dx.doi.org/10.1175/1520-0450\(1996\)035<0638:APFASB>2.0.CO;2](http://dx.doi.org/10.1175/1520-0450(1996)035<0638:APFASB>2.0.CO;2).
56. Shemo, Robert E., and **Jenni L. Evans**, 1996: Contributions of various classes of convection to rainfall in the Atlantic Ocean. *Meteorology and Atmospheric Physics*, **60**, 191-205, doi: 10.1007/BF01029795.
57. Watterson, Ian G., **Jenni L. Evans** and Brian F. Ryan, 1995: Seasonal and interannual variability of tropical cyclogenesis: Diagnostics from large-scale fields. *Journal of Climate*, **8**, 3052-3066, doi: [http://dx.doi.org/10.1175/1520-0442\(1995\)008<3052:SAIVOT>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(1995)008<3052:SAIVOT>2.0.CO;2).
58. **Evans, Jenni L.**, Brian F. Ryan and John L. McGregor, 1994: A numerical exploration of the sensitivity of tropical cyclone rainfall intensity to sea surface temperature. *Journal of Climate*, **7**, 616-623, doi: [http://dx.doi.org/10.1175/1520-0442\(1994\)007<0616:ANEOTS>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(1994)007<0616:ANEOTS>2.0.CO;2).
59. Lighthill, Sir James, Gregory J. Holland, William M. Gray, Christopher Landsea, George Craig, **Jenni L. Evans**, Yoshio Kurihara and Charles P. Guard, 1994: Global climate change and tropical cyclones. *Bulletin of the American Meteorological Society*, **75**, 2147-2157.
60. **Evans, Jenni L.**, 1993: Sensitivity of tropical cyclone intensity to sea surface temperature. *Journal of Climate*, **6**, 1133-1140, doi: [http://dx.doi.org/10.1175/1520-0442\(1993\)006<1133:SOTCIT>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(1993)006<1133:SOTCIT>2.0.CO;2).

Refereed Journal Articles (continued)

61. **Evans, Jenni L.**, and Robert J. Allan, 1992: El Niño/Southern Oscillation modification to the structure of the monsoon and tropical cyclone activity in the Australasian region. *International Journal of Climatology*, **12**, 611-623, doi: 10.1002/joc.3370120607.
62. Ryan, Brian F., Ian G. Watterson and **Jenni L. Evans**, 1992: Tropical cyclone frequencies inferred from Gray's yearly genesis parameter: Validation of GCM tropical climates. *Geophysical Research Letters*, **19**, 1831-1834, doi: 10.1029/92GL02149.
63. Holland, Gregory J., and **Jenni L. Evans**, 1992: Interactions between a barotropic vortex and an idealized subtropical ridge. Part II: Structure changes. *Journal of the Atmospheric Sciences*, **49**, 963-975, doi: [http://dx.doi.org/10.1175/1520-0469\(1992\)049<0963:IBABVA>2.0.CO;2](http://dx.doi.org/10.1175/1520-0469(1992)049<0963:IBABVA>2.0.CO;2).
64. **Evans, Jenni L.**, 1992: Comment on "Can existing climate models be used to study anthropogenic changes in tropical cyclone climate?" *Geophysical Research Letters*, **19**, 1523-1524, doi: 10.1029/92GL01120.
65. **Evans, Jenni L.**, 1991: Tropical cyclones and climate change. *Search*, **22**, 26-28.
66. **Evans, Jenni L.**, Gregory J. Holland and Russell L. Elsberry, 1991: Interactions between a barotropic vortex and an idealized subtropical ridge. Part I: Vortex motion. *Journal of the Atmospheric Sciences*, **48**, 301-314, doi: [http://dx.doi.org/10.1175/1520-0469\(1991\)048<0301:IBABVA>2.0.CO;2](http://dx.doi.org/10.1175/1520-0469(1991)048<0301:IBABVA>2.0.CO;2).
67. Smith, Roger K., Michael J. Coughlan and **Jenni L. Lopez (nee Evans)**, 1986: Southerly nocturnal wind surges and bores in northeastern Australia. *Monthly Weather Review*, **114**, 1501-1518, doi: [http://dx.doi.org/10.1175/1520-0493\(1986\)114<1501:SNWSAB>2.0.CO;2](http://dx.doi.org/10.1175/1520-0493(1986)114<1501:SNWSAB>2.0.CO;2).

Peer Reviewed Books

- Laing, Arlene, and *Jenni L. Evans*, 2015: *Introduction to tropical meteorology*, 2nd Edition. Peer-reviewed online textbook. Freely available online in both Spanish and English at http://www.meted.ucar.edu/tropical/textbook_2nd_edition/. Produced by the COMET Program at the National Center for Atmospheric Research (NCAR).

Textbook used as basis of [Murtugudde Climate Academy](#) (tropical meteorology classes) at University of Maryland (July 2021), developed as a podcast: <https://www.youtube.com/watch?v=IEor-SMEiVU&list=PLV1RtvJKmhG6S5NhpRtAKuPAWykewd4Sg>

Peer Reviewed Book Chapters

Postdoctoral Fellow and Student co-authors: graduate students or postdocs for whom I am/was major advisor for the published research; *all other students* (graduate committees or undergraduate advisees).

- **Evans, Jenni L.**, 2017: Tropical Cyclone Intensity, Structure, and Structure Change. In *Global Guide to Tropical Cyclone Forecasting 2nd Edition*, C. P. Guard (Chief Editor). WMO-No. #1194, p 126-155. World Meteorological Organisation Report, Geneva, Switzerland. Available <https://www.wmo.int/cycloneguide/pdf/Global-Guide-to-Tropical-Cyclone-Forecasting.pdf>.
- **Evans, Jenni L.**, Jose D Fuentes, Xiao-Ming Hu and Holly L. Hamilton, 2015: Earth-Atmosphere interactions: Tropical storm and hurricane activity in the Caribbean and their consequent health impacts. *West Indies Health Care and Disaster Preparedness*, M. L. Martin, A. Snyder, A. W. Jones and L. U. Walker (Eds).
- **Evans, Jenni L.**, 2014: Tropical Cyclone Intensity, Structure, and Structure Change. In *Global Guide to Tropical Cyclone Forecasting 1st Edition*, C. P. Guard (Chief Editor). World Meteorological Organisation, Geneva, Switzerland. Available <https://www.wmo.int/cycloneguide/pdf/Global-Guide-to-Tropical-Cyclone-Forecasting.pdf>.
- **Evans, Jenni L.**, and Robert E. Hart, 2006: Extratropical transition of tropical cyclones in the North Atlantic. *Advances in Fluid Mechanics (Vol. 39), Atmosphere–Ocean Interactions*, Volume 2. WIT Press, Southampton, UK, 155-189. Will Perry (Ed).
- **Evans, Jenni L.**, 2001: Hurricanes, Typhoons and Tropical Storms: A Theoretical Review. In *Encyclopedia of Global Environmental Change*, T. Munn, M. C. MacCracken and J. S. Perry (Eds), John Wiley and Sons, London UK.

Articles Currently in Review

Student co-authors: graduate students or postdocs for whom I am/was major advisor for the published research; *all other students* (graduate committees or undergraduate advisees).

- Polasky, Andrew, Jenni L. Evans, and Jose Fuentes, 2022: Statistical climate CCdownscaling: an open-source Python package for multivariable statistical climate model downscaling V1.0. *Geoscientific Model Development* (submitted).

Technical Reports and Published Reviews

This list does not include white papers to agencies or numerous reports to sponsors.

- **Evans, Jenni L.**, 2001: Book review of “Hurricanes, their nature and impacts on society” by R. A. Pielke Jr. and R. Pielke Sr. *Climatic Change*, 49, 367-369.
- King C., R. Harmon, T. Bullard, **Jenni L. Evans**, W. Hollowell, J. Juvik, R. Johnson and M. Larsen, 1999: A technical analysis of Puerto Rico and Hawai'i for tropical testing of Army materiel and systems. *Technical report, Environmental Systems Branch, U.S. Army Research Office*, Research Triangle Park, NC, March 1999.
- King C., R. Harmon, T. Bullard, **Jenni L. Evans**, R. Johnson and M. Larsen, 1998: A technical analysis to identify ideal geographic locations for tropical testing of Army materiel and systems. *Technical report, Environmental Systems Branch, U.S. Army Research Office*, Research Triangle Park, NC, July 1998.
- **Evans, Jenni L.**,1997: Hurricanes and Global Warming. Report to the U.S. *Environmental Protection Agency (US EPA)*.
- **Evans, Jenni L.**,1990: Envisaged impacts of enhanced greenhouse warming in tropical cyclones in the Australian region. *CSIRO Division of Atmospheric Research Technical Paper No. 20*, 31pp.

PRESENTATIONS

International Invited Presentations

- 2022 Economics and Management in the era of Data Science (EMbeDS Workshop, Scuola Superiore Sant'Anna, Pisa, Italy)
- 2021 All-Atlantic2021 – All-Atlantic R&I for a Sustainable Ocean
- 2020 6th High Level Industry-Science-Government Dialogue on Atlantic Interactions: All-Atlantic Summit on Innovation for Sustainable Marine Development and the Blue Economy: Fostering Global Economic Recovery in a Post-pandemic World.
- 2019 European Meteorological Society Annual Meeting, Lyngby, Denmark.
- 2015 PANDOWAE Final Symposium: Progress and Future Directions of Research on Predictability and Dynamics of Midlatitude Weather Systems, Karlsruhe, Germany.
- 2014 8th WMO (World Meteorological Organisation) International Workshop on Tropical Cyclones (IWTC-VII), Jeju Island, Republic of Korea.

International Invited Presentations (continued)

- 2011 XXV IUGG General Assembly, Joint symposium: (J-M10) Monsoons, Tropical Cyclones and Tropical Dynamics. Melbourne, Australia.
- 2010 7th WMO (World Meteorological Organisation) International Workshop on Tropical Cyclones (IWTC-VII), La Réunion, France.
- 2008 National workshop on Subtropical Cyclones and Extratropical Transitions, Agencia Estatal de Meteorología, Madrid, Spain (Multiple presentations).
- 2006 6th WMO International Workshop on Tropical Cyclones (IWTC-VI), San Jose, Costa Rica.
- 2006 1st International THORPEX Science Symposium, Montreal, Canada.
- 2005 3rd WMO International Workshop on Extratropical Transition (IWET-III), Perth, Australia (Multiple presentations).
- 2003 II Simposium Internacional Sobre Ciclonología Tropical “Padre Benito Viñes S. J. In Memoriam” (co-sponsored by the WMO, Spanish and Cuban National Weather Services), Havana, Cuba.
- 2003 2nd International Workshop on Extratropical Transition (IWET-II), Halifax, Nova Scotia, Canada.
- 2003 Hadley Centre for Climate Change Research, United Kingdom Meteorological Office, Bracknell, UK.
- 2002 5th WMO International Workshop on Tropical Cyclones (IWTC-V), Cairns, Australia.
- 1999 WMO Workshop on the Extratropical Transition of Tropical Cyclones, Kaufbeuren, Germany.
- 1998 Risk Prediction Initiative (RPI) Workshop, Bermuda Biological Station, St Georges, Bermuda.
- 1996 Department of Applied Mathematics and Theoretical Physics, Cambridge University, Cambridge, UK.
- 1995 Risk Prediction Initiative (RPI) Workshop, Bermuda Biological Station, St Georges, Bermuda.
- 1993 3rd WMO International Workshop on Tropical Cyclones (IWTC-III), Huatulco, Mexico.
- 1988 3rd ONR Tropical Cyclone Motion Workshop, Rainbow Beach, Queensland, Australia.

Invited Presentations

1. May 2022: Food, Energy Water Consciousness (FEWCON) Annual Meeting, The Pennsylvania State University, University Park, PA.
2. June 2021: Celebrating International Research and Education Partnerships 2021 (CIREP 2021), The Pennsylvania State University, University Park, PA.
3. December 2020: Statistical Methods for the Physical Sciences (STAMPS) Series, Carnegie Mellon University, Pittsburgh, PA.
4. May 2020: EESI Earth Talks Panel, The Pennsylvania State University, University Park, PA.
5. May 2020: AMS Chapter, Corpus Cristi TX.
6. September 2019: AMS 100 Years, 6th Joint Conference of the American Meteorological Society and EUMETSAT on Satellites, Boston MA.
7. April 2019: New Minds for New Science Symposium, American Meteorological Society, Washington DC.
8. March 2019: PSU Law Review Symposium, The Pennsylvania State University and K. & L. Gates, Pittsburgh, PA.
9. January 2019: Special Symposium on Catalyzing Innovation in Weather Science Internationally, 99th American Meteorological Society Annual Meeting, Phoenix, AZ.
10. December 2018: Second ADAPT Symposium, Keynote Speaker, The Pennsylvania State University, University Park, PA.
11. September 2018: Tribute to Warren Washington, The Pennsylvania State University, University Park, PA, <https://www.youtube.com/watch?v=Pe-x9UeoyIk&index=14&list=PLaOAwvxJsi4ujKTtojoOtCSD68fuUG4Ca>
12. December 2017: American Geophysical Union Fall Meeting, New Orleans, LA.
13. February 2017: Department of Geography, The Pennsylvania State University, University Park, PA.
14. October 2016: Institutes Days, The Pennsylvania State University, University Park, PA.
15. June 2013: U.S. Hurricane CLIVAR (Climate Variability and Predictability Research Program) Workshop, GFDL, Princeton, NJ.
16. April 2013: Department of Civil and Environmental Engineering, Duke University, Durham, NC.
17. February 2013: CarbonEARTH Conference, The Pennsylvania State University, University Park, PA.

Invited Presentations (continued)

18. October 2012: Research Unplugged Lecture Series, The Pennsylvania State University, University Park, PA.
19. April 2011: Department of Earth Science, California University of Pennsylvania, California, PA.
20. March 2011: Department of Meteorology, The Pennsylvania State University, University Park, PA.
21. April 2010: University at Albany, State University of New York, Albany, NY.
22. February 2010: University at Stony Brook, State University of New York, Stony Brook, NY.
23. January 2009: Lamont Dougherty Earth Observatory, Columbia University, Palisades, NY.
24. December 2008: Department of Geography, The Pennsylvania State University, University Park, PA.
25. October 2008: Climate Change Lecture Series, Bruce Museum, Greenwich, CT.
26. October 2008: PSUBAMS, Department of Meteorology, The Pennsylvania State University
27. October 2008: NSF Cutting Edge Workshop, Northfield, MN.
28. May 2007: NSF Early Career Workshop for Junior Faculty, College of William and Mary, Williamsburg, VA.
29. January 2007: AMS Forum on Climate Change Manifested by Changes in Weather, San Antonio, TX.
30. January 2007: Earth System Science Center, The Pennsylvania State University
31. August 2006: National Hurricane Center, National Weather Service, Miami, FL.
32. May 2006: NSF Early Career Workshop for Junior Faculty, College of William and Mary, Williamsburg, VA.
33. September 2005: Department of Meteorology, Florida State University, Tallahassee, FL.
34. October 2004: Department of Meteorology, The Pennsylvania State University
35. April 2003: Lock Haven University, Lock Haven, PA.
36. February 2003: New Perspectives on Catastrophe Risk, Risk Management Solutions National Workshop, 10-13 February 2003: Las Palmas CA.
37. February 1999: US National Interdepartmental Hurricanes Conference, Biloxi, MI.
38. August 1998: Climate Extremes: Changes, Impacts and Projections, Aspen Global Change Institute, Aspen CO.

Invited Presentations (continued)

39. May 1997: State University of New York at Albany, Albany NY.
40. April 1996: Department of Earth, Atmosphere and Planetary Sciences, Harvard University, Cambridge, MA.
41. April 1996: Women in Science and Engineering (WISE) Voices Conference, The Pennsylvania State University, University Park, PA.
42. August 1995: Center for Meteorology and Physical Oceanography, The Massachusetts Institute of Technology, Cambridge, MA.
43. July 1995: Department of Meteorology, State University of New York, Albany, NY.
44. August 1994: Anticipating Global Change Surprises Workshop, Aspen Global Change Institute, Aspen CO.
45. August 1992: The Coupled Climate System and Global Change Workshop, Aspen Global Change Institute, Aspen, CO.
46. July 1992: National Center for Atmospheric Research (NCAR), Boulder, CO.
47. April 1992: Department of Meteorology, The Pennsylvania State University, University Park, PA.
48. November 1991: Department of Atmospheric Physics, University of Arizona, Tucson, AZ.
49. June 1991: Convener and lead presenter of a set of Tropical Climate Change Workshops for the (1) Conservation Commission of the Northern Territory, and (2) the CSIRO Centre for Wildlife and Ecology, Alice Springs, Northern Territory, Australia.
50. May 1991: Department of Meteorology, Texas A&M, College Station, TX.
51. May 1991: Department of Geological and Atmospheric Sciences, Iowa State University, Ames, IA.
52. September 1988: Department of Meteorology, Florida State University, Tallahassee, FL.
53. February 1988: Tropical Cyclone Motion Workshop, Naval Postgraduate School, Monterey, CA.

FIELD PROGRAM PARTICIPATION

Operational Science Team, Tropical Pacific Asian Regional Campaign (T-PARC), North Pacific Ocean, August-September 2008

My participation in this experiment revolved around determining scientific priorities and strategies for deploying observing platforms in a multi-national field experiment.

Science Team, NOAA Research Flights (NOAA Gulfstream-IV jet and WP-3D Orion) into Hurricane Ivan, 14 – 15 September 2004

These two NOAA research flights into Hurricane Ivan (2004) were on the two days prior to its landfall in Alabama.

September 14: flew on the NOAA Gulfstream-IV jet, observing the environment around the storm. September 15: flew on the NOAA WP-3D Orion prop plane; the science mission for this flight required eight crossings of the hurricane's eye while it was a Cat 4 system. I was involved in QC of GPS dropsonde data.

Rawinsonde coordinator, US Tropical Cyclone Motion 1990 (TCM-90) Field Program, Guam, August 1990

TCM-90 was one of five cooperative and coincident national field experiments designed to study the motion of tropical cyclones in the western North Pacific region in August and September 1990.

Meteorological observer, NOAA Research flight (WP-3D Orion) into Hurricane Florence, September 1988

This flight was organized through the Hurricane Research Division of the Atmospheric and Oceanic Marine Laboratory of the National Oceanic and Atmospheric Administration of the U.S., Miami, FL. My participation included realtime quality control of dropwindsondes.

Meteorological observer in Australia

Southerly Buster field experiment II, Narooma, NSW, 1985

Meteorological observer, Southerly Buster field experiment I, Nowra, NSW, 1982

Meteorological observer, Morning Glory field experiment, Burketown, QLD, 1982

Meteorological observer, Australian Cold Fronts Research Program Phase II, Branxholme, VIC, 1981

Conference Presentations

I have presented or co-authored over 120 conference presentations/papers, with the vast majority of my co-authors being my students or postdocs. An incomplete list of these presentations is appended. To satisfy eligibility requirements for the American Meteorological Society's Max Eaton Student Prize, over 25 additional papers on my group's research have also been presented with my students as sole authors.

POSTDOCTORAL FELLOW AND GRADUATE STUDENT MAJOR ADVISOR

Current Research Supervised

2016 – present Andrew Polasky (Doctoral candidate): INFEWS: Climate change downscaling for food, energy and water resources over the US Midwest and western Africa.

Graduate Committee Chair or Co- Chair, Postdoctoral Fellow Advisor (Completed)

2021 – 2022 Alex Alvin Cheung (Honors student): Detecting tropical cyclone secondary eyewalls through development of a new satellite microwave algorithm.

2016 – 2021 Kelly Núñez Ocasio (Doctorate): Role of topography in the development of mesoscale convective systems in tropical West Africa. Kelly went on to an NCAR Advanced Study Program (ASP) Postdoctoral Fellowship.

2017 – 2020 Alex Kowaleski, Postdoctoral fellow: Novel methods for exploring the limits of tropical cyclone forecasting. Alex moved into the risk management community as a natural catastrophe research scientist (Chubb Insurance).

2016 – 2018 Holly Hamilton, Postdoctoral fellow: Climate change downscaling for food, energy and water resources over the US Midwest. Previously: Climate change impacts on organized convective weather systems in tropical Africa. Holly moved on to be Director of Meteorology, Turks and Caicos Islands Airport Authority, Providenciales, Caicos Islands, Turks and Caicos.

2017 Alex Kowaleski, Doctorate: Novel methods for exploring the limits of tropical cyclone forecasting.

2016 Holly Hamilton, Doctorate: Relationships between rainfall characteristics and environmental predictors in the West African region.

2013 Alex Kowaleski, Master of Science: Sensitivity of tropical cyclone potential intensity to observed near-surface conditions. Alex continued on to doctorate with me, graduating in 2017.

Graduate Committee Chair or Co-Chair, Postdoctoral Fellow Advisor (continued)

2012 Mike Lowe, Master of Science (co-adviser: George Young): Reducing hurricane evacuation costs in Florida through improved track forecasting. Mike is now an AOPC trainer.

2011 Holly Hamilton, Master of Science: Observations of tropical cyclone boundary layer winds in the core of Hurricane Ike. Holly continued her doctoral studies with me, co-advised with Prof. Jose Fuentes.

2011 Prabhani Kuruppumullage Don, Master of Science in Statistics (co-advised with Francesca Chiaromonte): Evolution characteristics of ensemble forecasts through clustering. Prabhani graduated with a Doctorate in Statistics in Summer 2014 and is now an Assistant Professor in the Department of Statistics at Penn State.

2011 Jeff Waters, Master of Science (co-adviser: Chris Forest): Towards improving the detection of North Atlantic tropical cyclogenesis (TCG). Jeff works in the risk modeling industry (Risk Management Solutions).

2010 Michael Hernandez, Master of Science: The effects of latent heating on the extratropical transition of Typhoon Sinlaku. Upon graduating, Mike took a position at the University of Oklahoma.

2009 Aviva Braun, Master of Science: A comparison between South Atlantic and Tasman Sea subtropical storms. Upon graduating, Aviva joined the Peace Corps and was stationed in Senegal, West Africa. She is now with the National Weather Service office in Boise, ID.

2009 Thomas Sabbatelli, Master of Science (co-adviser: Mike Mann): The influence of climate state variables on Atlantic tropical cyclone activity. Tom works in the risk modeling industry (Risk Management Solutions).

2007 Daniel Veren, Master of Science: Statistical analysis of ensemble forecasts of the structural evolution of Typhoon Tokage (2004) through extratropical transition. Daniel is an Engineer at Ball Aerospace (formerly US Air Force).

2006 Mark Guishard, Doctorate: Atlantic subtropical storms: Climatology and characteristics. Mark was Director of the Bermuda Weather Service (2006–2012), then at the Risk Prediction Initiative (RPI; 2013–2018), before returning once again to Director of the Bermuda Weather Service (2019–present).

2006 Adam Moyer, Master of Science: Analysis of observational datasets of tropical cyclone wind radii. Adam is now Senior Vice President at Planalytics, Inc.

2005 Jessica Higgs, Master of Science: Regression models for warm season cyclone wind radii. Jessica (Arnoldy) is a forecaster and analyst with The Weather Channel.

Graduate Committee Chair or Co-Chair, Postdoctoral Fellow Advisor (continued)

2005 Aaron Pratt, Master of Science: Tropical cyclogenesis forecasting skill of the Global Forecasting System (GFS) during the 2002 and 2003 Atlantic hurricane seasons. Aaron earned a doctorate from Howard University and went on to a NASA postdoctoral fellowship.

2004 Justin Arnott, Master of Science: Cluster analysis approach to classification and simulation of cyclone structure. Justin is a Science and Operations Officer for the US National Weather Service (Gaylord MI).

2003 David Robinson, Master of Science: The effect of model forecast track errors on QPF in Atlantic tropical cyclones. David is a private industry forecaster.

2002 Barbara Prater, Master of Science: The extratropical transition of Hurricane Irene (1999): Case study and satellite-derived data assimilation. Barb earned her PhD in 2014 from Univ. Nebraska and is a Science and Operations Officer at NWS Omaha/Valley, NE.

2001 Robert E. Hart, Postdoctoral fellow: Development of operational applications for the Cyclone Phase Space. Bob is a Professor in the Department of Earth, Ocean and Atmospheric Science at Florida State University.

2001 Robert E. Hart, Doctorate: Extratropical transition of North Atlantic tropical cyclones.

2001 Steven Chan, Master of Science: Composite structure and variability of the eastern Hemisphere ITCZ during boreal summer in ECMWF Re-analysis, CCM3.6 and SI2000 General Circulation Models. Steven is a research fellow at Newcastle University, UK.

2000 Giorgos Tsakrklides, Master of Science: Diurnal and seasonal variability of organized tropical convection. George is a high school science teacher at Moses Brown School, Providence RI.

1999 Sytske Kimball [Drury], Doctorate: Idealized simulations of hurricane-trough interactions. Sytske is a Professor at the University of South Alabama in Mobile.

1997 Francine A. Jaskiewicz, Master of Science: The Hadley circulation. After a stint at the Weather Channel, Francine returned to Philadelphia to the family antique jewellery business.

1997 Daniel P. Guertin, Master of Science: PV analyses of tropical cyclone intensity change. After some time on Wall Street, Dan is a Senior Meteorologist at EDF Trading, London, UK.

Graduate Committee Chair or Co-Chair, Postdoctoral Fellow Advisor (continued)

1997 Joseph R. Davis, Master of Science: A history and significance of aircraft reconnaissance. Upon graduation, Joe took a job with Accu Weather.

1995 Jon Flatley, Master of Science: Analysis of ARM/CART site data. Jon is an adjunct faculty in the Department of Earth Sciences at Millersville University and climate change blogger.

1994 Robert E. Shemo, Master of Science: Automated satellite convection detection and classification system. Information Systems Compliance Manager, People's Mutual Holdings.

Visiting Doctoral Students

2016 and 2017 **Juan Jesus González-Alemán**, *Environmental Sciences Institute, University of Castilla-La Mancha (UCLM), Toledo, Spain*

Juanje is presently a doctoral student. During his Masters research, we began to collaborate since his research was related to my subtropical cyclone research. In 2019, this collaboration continues, now looking at ensemble forecasts of initially subtropical Hurricane Alex (2016).

2010 and 2014 **Julia Keller**, *Institute of Meteorology and Climate Research, Karlsruhe Institut für Technologie (KIT), Karlsruhe, Germany*

Julia graduated her PhD from the Department of Physics at KIT. After a brief stint in the research division of the DWD (German Weather Service), she took a position at the World Meteorological Organisation in Geneva. She has since returned to DWD Research.

Incomplete List of Other Graduate Committee Service

I have served on PhD and Masters committees in 7 Penn State Departments [Meteorology; Statistics; Mathematics; Geosciences; Agricultural, Environmental & Regional Economics; Geography; Electrical Engineering] in 4 Colleges.

External committee service includes the Institute for Meteorology and Climate Research, University of Karlsruhe, Germany; Department of Civil and Environmental Engineering, Duke University; and Department of Atmospheric Sciences at the University at Albany, SUNY.

External examiner for Department of Meteorology, University of Melbourne, Australia; and the Department of Mathematics, Monash University, Australia.

1. Dapeng Feng (PhD Department of Civil & Environmental Engineering, 2019–present; Chaopeng Shen adviser)

Subset of Other Graduate Committee Service (continued)

2. Stephanie Blanda (PhD Department of Mathematics, 2019; Diane Henderson adviser)
3. Esha Zaveri (PhD Agricultural, Environmental and Regional Economics 2016; Karen Fisher-Vanden adviser)
4. Phuc Lam Hoang (PhD Mathematics, Monash University, Melbourne, Australia 2016; Michael Reeder adviser)
5. Daniel Brouillette (Masters Meteorology 2015; Michael Mann adviser)
6. Dandan Tao (PhD Meteorology 2015; Fuqing Zhang adviser)
7. Jon Poterjoy (PhD Meteorology 2014; Fuqing Zhang adviser)
8. Julien Brun (PhD, Department of Civil and Environmental Engineering, Duke University 2013; Ana Barros adviser)
9. Meri Davlasheridze (PhD, Agricultural, Environmental and Regional Economics 2013; Karen Fisher-Vanden adviser)
10. Erin Munsell (Masters Meteorology 2013; Fuqing Zhang adviser)
11. Julia Keller (PhD, Department of Physics, University of Karlsruhe, Germany 2012; Sarah Jones adviser)
12. Luna Rodriguez (PhD Meteorology 2012; George Young and Sue Ellen Haupt co-advisers)
13. Prabhani Kuruppumullage Don (Masters Statistics 2011; Francesca Chiaromonte adviser)
14. Michael Kozar (Masters Meteorology 2011; Mike Mann adviser)
15. Fangxing Fan (PhD Meteorology 2011; Mike Mann adviser)
16. Andreas Artemiou (PhD Statistics 2010; Bing Li adviser)
17. Savin S. Chand (PhD Meteorology, University of Melbourne, Australia 2010; Kevin Walsh adviser)
18. Corene Matayas (PhD Geography 2005; Andrew Carleton adviser)
19. Jason Cole (PhD Meteorology 2004; Eugene Clothiaux adviser)
20. Maria Teresa Cavazos (PhD Geography 2000; Rob Crane adviser)
21. Jan Dutton (PhD Geosciences 1999; Eric Barron adviser)
22. Christopher Poulsen (PhD Geosciences 1999; Mike Arthur adviser)
23. Deborah Hanley (PhD Atmos. Sci., SUNY Albany 1999; Dan Keyser, John Molinari advisers)
24. Tim Marchok (Masters Meteorology 1994; Bill Frank adviser)
25. Lisa Briegel (Masters Meteorology 1993; Bill Frank adviser)

CURRENT PROFESSIONAL SERVICE

Current External Professional Service

2022 – Professional Team Hurricane Meteorologist

2022 – Professional Team Flood Meteorologist

Florida Commission for Hurricane Loss Projection Methodology (FCHLPM)

Florida State Board of Administration

The *Florida Commission for Hurricane Loss Projection Methodology* was created by the Florida Legislature in 1995 to evaluate proprietary modeling methodologies used to project insured hurricane losses in Florida. At the same time, the Legislature created an interdisciplinary Professional Team (“Pro Team”) to evaluate these proprietary models and to report on their findings to the Commission. I serve as the lead meteorologist on the Pro Team. The other core fields represented are wind engineering, statistics, actuarial, and computer science.

The Pro Team conducts scientific and technical audits of the proprietary software used in submissions to insurance regulators for setting hurricane insurance premiums. My expertise in this process has also led to my advising state government offices in Hawai’i, Massachusetts, Maryland, and South Carolina.

2020 – Culture and Inclusion Cabinet (CIC), American Meteorological Society

2020 – Seed Fund Steering Committee, Northeast Big Data Innovation Hub

2018 – Earth Sciences Council, Universities Space Research Association

USRA brings together universities and other research organizations together with the governments of the United States and other nations in support of development and application of space-related science, technology and engineering. The Earth Sciences Council provides leadership in the realm of earth and environmental sciences.

2012 – Subject Matter Expert, United Nations ESCAP/WMO Typhoon Committee

UN ESCAP is the Economic and Social Commission for Asia and the Pacific of the United Nations and is organized under the auspices of the World Meteorological Organization. Subject Matter Experts contribute to professional development activities focused on improving typhoon forecasting in the fourteen member nations of the western North Pacific.

Reviewer for National Science Boards from USA (incl. Puerto Rico), Britain, Australia, Germany, Canada, Hong Kong, Israel, China, Spain, Japan

Current External Professional Service (continued)

Reviewer for numerous promotion and tenure cases from US, Europe, Britain, Australia

Reviewer: J. Atmospheric Sciences; Quarterly Journal of the Royal Meteorological Society, UK; Monthly Weather Review; Australian Meteorological & Oceanographic Journal; J. Climate; Geophysical Research Letters; International J. Climatology; J. Meteorology Society of Japan; Weather and Forecasting; Climatic Change; Bulletin of the American Meteorological Society; Global and Planetary Change, others

Current Service in Academic Planning and Governance

2022 – Search Committee, Head, Department of Meteorology and Atmospheric Science

2021 – Co-Convenor, Social Justice Advisory Board, Office of the Senior Vice President for Research

2020 – Promotion and Tenure Committee, Department of Meteorology & Atmospheric Science

2020 – Committee on Belonging, Department of Meteorology & Atmospheric Science

2019 – Director, Penn State's Institute for Computational & Data Sciences (ICDS)

2017 – Partnership Liaison, Penn State–Monash (Australia) Global Engagement Program

2015 – Executive Committee, Penn State Research Computing Cyber Infrastructure (RCCI) Governance

2015 – RCCI Working Group on High Performance Computing, *ex officio*

2015 – Penn State Working Group on the NSF Northeast Big Data Hub

2010 – Graduate Academic Program Committee, Department of Meteorology & Atmospheric Science

2008 – Steering Committee, Earth System Science Center (ESSC)

Ongoing Broad range of activities promoting science communications

Ongoing Promotion of recruitment/retention of underrepresented groups in the sciences and engineering

PRIOR PROFESSIONAL SERVICE

Prior External Professional Service

2020 – 2021 Hurricane Meteorologist, FCHLPM Professional Team
Florida Commission on Hurricane Loss Projection Methodology
Florida State Board of Administration

2017 – 2022 4-year Presidential term, American Meteorological Society
2021 – 2022 Second Past President, American Meteorological Society
2020 – 2021 Past President, American Meteorological Society
2019 – 2020 Centennial President, American Meteorological Society
2018 – 2019 President-Elect, American Meteorological Society

The American Meteorological Society (AMS) is the premier national professional organization for atmospheric and related sciences. AMS membership includes broad participation from academic, government, private industry, non-government organizations and elsewhere, with members being forecasters, administrators, consultants, broadcasters, weather enthusiasts and researchers.

*denotes active committee service during my 4-year term as President of the American Meteorological Society.

Ex-officio on all other committees of the American Meteorological Society.

2017 – 2022* Executive Committee, American Meteorological Society

2019 – 2020* Chair, AMS Executive Committee

2017 – 2022* Council, American Meteorological Society

2019 – 2020* Chair, AMS Council

2017 – 2022* Finance Committee, American Meteorological Society

2019 – 2020* Vice-chair, AMS Finance Committee

2019 – 2022* Ethics Committee, American Meteorological Society

2019 – 2022* Fellows Committee, American Meteorological Society

2021 – 2022* Chair, AMS Fellows Committee

2020 – 2021* Vice-chair, AMS Fellows Committee

2021 UCAR Management Site Visit Team (SVT). SVT convened by NSF to Review Management of the National Centers for Atmospheric Research (NCAR) by the University Corporation for Atmospheric Research (UCAR).

Prior External Professional Service (continued)

- 2021 Panelist, Faculty Perspectives on Academic Job Interviews. NCAR Fellows Association Professional Development.
- 2021 Organizing Committee, Celebrating International Research and Education Partnerships 2021 (CIREP 2021) workshop
- 2021 Co-Chair, Interagency Council on Advancing Meteorological Services (ICAMS): A New Approach to Federal Meteorological Coordination and Innovation. AMS Annual Meeting Town Hall.
- 2020 – 2021 Hurricane Meteorologist, Hurricane Catastrophe Model Evaluation Team Hawaii Insurance Division, Department of Commerce and Consumer Affairs
- 2017 – 2021* Investment Committee, American Meteorological Society
- 2019 – 2020* Vice-chair, AMS Investment Committee
- 2017 – 2021* Investment Committee, American Meteorological Society
- 2019 – 2020* Vice-chair, AMS Investment Committee
- 2020 Session co-chair, Women in the Tropics Part II. Joint Session: 33rd Conference on Climate Variability and Change/Tropical Meteorology and Tropical Cyclones Symposium. *100th AMS Annual Meeting, 12-16 January 2020, Boston MA.*
- 2020 Organizing Committee, Workshop on Earth System Predictability Research and Development, Board on Atmospheric Sciences and Climate, NASEM
- 2020 National Academies Earth System Predictability R&D Roundtable
- 2019 – 2020* Convenor and Chair, Centennial Annual Meeting, American Meteorological Society
- 2019 – 2020* Convenor, 100th Anniversary Program Committee, American Meteorological Society
- 2019 – 2020* Vice-chair, Centennial Committee, American Meteorological Society
- 2019 – 2020 National Academies Panel on Information Science for the Laboratory Assessments Board review of the Army Research Laboratory
- 2018 – 2021* Awards Oversight Committee, American Meteorological Society
- 2020 – 2021* Chair, AMS Awards Oversight Committee
- 2019 – 2020* Vice-chair, AMS Awards Oversight Committee
- 2018 – 2020* Annual Meeting Oversight Committee, American Meteorological Society

Prior External Professional Service (continued)

- 2017 Union session co-chair, IN31F: Examining Societal Impacts of the 2017 Atlantic Hurricane Season: Informatics and Engineering. American Geophysical Union Fall Meeting, New Orleans LA.
- 2017 US Delegation, World Meteorological Organisation Science Summit: Seamless research for weather, climate, water & environment. 16-23 October, Geneva, Switzerland.
- 2016 – 2019 2019 EarthCube Advisory Group (<http://earthcube.org/>), National Science Foundation
- 2016 NSF Panel to Review Management of the National Centers for Atmospheric Research (NCAR) by the University Corporation for Atmospheric Research (UCAR)
- 2016 Reviewer, US National Academy of Sciences Gulf Research Program
- 2016 NSF Proposal Review Panel (Atmospheric Science)
- 2016 Session chair, 2016 National Council for Science and the Environment (NCSE) 16th National Conference: The Food-Energy-Water Nexus, Washington, DC
- 2015 – 2021 Flood Meteorologist, FCHLPM Professional Team
Florida Commission on Hurricane Loss Projection Methodology
Florida State Board of Administration
- 2015 – 2017 Penn State representative, Board on Oceans and Atmosphere, Association of Public and Land-grant Universities (APLU)
- 2014 External reviewer, Department of Atmospheric and Environmental Science, University at Albany, State University of New York
- 2013 – 2016 Awards and Fellows Nominations Committee, American Meteorological Society
- 2011 – 2016 Science Advisory Board, NOAA/NCAR Developmental Testbed Center (DTC)
- 2011 – 2014 Nominations Committee for President & Councillors, American Meteorological Society
- 2010–2014 Co-Chair, World Meteorological Organisation (WMO) 8th International Workshop on Tropical Cyclones (IWTC-VIII), Republic of Korea
- 2011–2015 Editorial Board, Dataset Papers in Science: Atmospheric Science
- 2013 Postdoctoral Fellowships Review Panel, NASA

Prior External Professional Service (continued)

- 2012–2013 Review Team, Hurricane Risk Modeling for the South Carolina Insurance Administration
- 2012 NASA Postdoctoral Fellowships Review Panel
- 2011–2012 Reviewer, US National Academy of Sciences Report “Weather Services for the Nation: Second to None”
- 2011 Review Team Consulting Meteorologist, Hurricane Risk Modeling for the Maryland Department of Insurance
- 2007–2009 Executive Committee, Board on Oceans and Atmosphere, Association of Public and Land-grant Universities (APLU)
- 2006–2009 US Science Steering Committee, The Observing System Research and Predictability Experiment (THORPEX)
- 2007–2008 Hurricane Risk Modeling Consulting Meteorologist for the Massachusetts Property Insurance Underwriting Association
- 2006–2008 US Science Steering Committee, THORPEX/ T-PARC (Pacific Asian Regional Campaign)
- 2008 Co-Chair, Agencia Estatal de Meteorología National Workshop on Subtropical Cyclones and Extratropical Transitions, Madrid, Spain
- 2008 Science Operations Team (mission coordination for T-PARC field experiment) Extratropical Transition (ET), THORPEX/ T-PARC
- 2005–2008 Councilor (elected), American Meteorological Society (AMS)
- 2005–2007 Editor, Monthly Weather Review
- 2007 Council Facilitator, American Meteorological Society Statement “Hurricane Forecasting in the United States”
- 2006 Panelist, National Science Board Panel “Towards a national agenda for hurricane science and engineering”
- 2005 Program committee, 3rd WMO International Workshop on Extratropical Transition (IWET-III), Perth, Australia
- 2005 Panelist, National Research Council Panel “Weather for Earth Science and Applications from Space: A Community Assessment and Strategy for the Future”
- 2005 CAMEX Proposal Review Panel, NASA
- 2001–2005 Editorial Board, Bulletin of the American Meteorological Society
- 2000–2005 Science Steering Committee, United States Weather Research Program (USWRP)

Prior External Professional Service (continued)

- 2003–2004 Chair, AMS Nominations Committee for President and Councilors
- 2004 NOAA Hurricane Hunters flights into Hurricane Ivan, on the two days immediately prior to its landfall
- 2003 Professional Team Backup Meteorologist, Florida Commission on Hurricane Loss Projection Methodology
- 2002 Co-convenor, Hurricane Weather and Research Forecast (WRF) Modeling Workshop, National Science Foundation Headquarters, Arlington, Virginia
- 2001–2004 Associate Editor, Weather and Forecasting
- 2001–2003 AMS Nominations Committee for President and Councilors
- 2001 NSF IGERT Proposal Review Panel
- 1999 Chair, AMS Conference on Tropical Meteorology and Tropical Cyclones, Dallas, TX.
- 1999 Session chair, 1999 Meteorological Satellite Users' Conference of EUMETSAT, Copenhagen, Denmark
- 1998-2000 Science Team, United States Army Tropical Test Facility Relocation Initiative
- 1997-2000 Chair, AMS Tropical Meteorology and Tropical Cyclones Committee
- 1996-2000 Member, AMS Tropical Meteorology and Tropical Cyclones Committee

Prior Service in Academic Planning and Governance

- 2021 – 2022 Search Committee, Penn State Vice President for IT/Chief Information Officer
- 2020 – 2021 Search Committee, Department Head, Mechanical Engineering
- 2019 Search Committee, Penn State Vice President for IT/Chief Information Officer
- 2017 – 2019 Director, Penn State's Institute for CyberScience (ICS)
- 2017 – 2019 Penn State Working Group on Open Access to Research
- 2017 Driving Digital Innovation Panel, Penn State Strategic Plan Implementation, Behrend campus
- 2016 – 2020 Executive Committee, Driving our Digital Future
- 2016 – 2019 Advisory Committee, Earth and Environmental Systems Institute (EESI)
- 2016 – 2017 Ad Hoc Planning Committee for Climate Science dual title Ph.D. program, The Pennsylvania State University

Prior Service in Academic Planning and Governance (continued)

- 2016 Interim Director, Penn State's Institute for CyberScience (ICS)
- 2016 Liaison, Penn State – Australian and New Zealand University Partners
- 2016 Convener, NSF INFEWS proposal by the Climate Change and Impacts Downscaling (CCID) Science Team, Penn State, Lead Institution
- 2016 Search Committee, Penn State Vice President for IT/Chief Information Officer
- 2015 – 2016 Chair, Search Committee for the Inaugural Director of the Penn State Water Institute
- 2014 – 2017 Advisory Committee, Department of Meteorology and Atmospheric Science
- 2013–2016 Co-convenor, PSIEE/EESI Science Communications Workshops
- 2013–2016 Co-chair, Climate Change and Impacts Downscaling (CCID) Initiative of Penn State's Institutes of Energy and the Environment (IEE) [PSIEE renamed]
- 1994–2015 Honors Student Advisor, Department of Meteorology
- 2015 Co-Chair, Task Force to Review the Penn State Sustainability Institute
- 2014–2015 Acting Director, Penn State Institutes of Energy and the Environment (PSIEE)
- 2014–2015 Working Group for Strategic Planning, Office of the VP for Research
- 2014–2015 Penn State Strategic Planning Working Group: Managing and Stewarding our Resources
- 2014–2015 Penn State University Research Council Advisory Group
- 2014–2015 Penn State University Health Sciences Council
- 2014 Panel Moderator, 2014 Graduates of Earth and Mineral Sciences (GEMS) Industry Forum, Natural Disasters: The Power of Nature and Its Challenge to Energy Security [panel included Dept. Of Energy Assistant Secretary Hoffman]
- 2014 Lead PI, NSF STC proposal by the Climate Change and Impacts Downscaling (CCID) Science Team, Penn State, Lead Institution
- 2013 Interim Director, Earth and Environmental Systems Institute (EESI)
- 2013 Organizing Committee, Science Communications Initiative, PSIEE/EESI
- 2012–2013 Chair, Spreading the Word About EMS (SWAE) Committee, College of Earth and Mineral Sciences

Prior Service in Academic Planning and Governance (continued)

- 2012 Red Team reviewer, SCRiM [Network for Sustainable Climate Risk Management] proposal to NSF SRN (awarded)
- 2011–2014 Chair, Promotion and Tenure Committee, Department of Meteorology
- 2010–2012 Chair, Graduate Academic Program Committee, Department of Meteorology
- 1994–2011 Advisory Board, Women in Science and Engineering (WISE) Institute, The Pennsylvania State University
- 2007–2011 Advisory Committee, Center for Energy and Environmental Risk (CEER)
- 2010 Ad Hoc Committee on Workshops, Earth and Environment Systems Institute
- 2009–2010 Department of Energy and Mineral Engineering Faculty Search Committee, Quantitative Analysis of Energy Risk
- 2009–2010 Promotion and Tenure Committee, Department of Meteorology
- 1999–2009 Chair, Opportunities Committee, Department of Meteorology
- 2009 Distinguished Professor Nomination Committee, College of Earth & Mineral Sciences
- 2009 Environment Fellows Selection Committee, Earth & Environmental Systems Institute
- 2009 Department of Statistics External Review
- 2008–2009 Ph.D. Candidacy Exam Framework Review, Department of Meteorology
- 2008–2009 Faculty Search Committee, Quantitative Analysis of Energy Risk, Department of Energy and Mineral Engineering
- 2008 Associate Department Head Search Committee, Department of Meteorology
- 2007–2009 Advisory Committee, Earth and Environmental Systems Institute
- 2007–2008 Strategic Planning Committee, Earth and Environmental Systems Institute
- 2006–2007 Chair, Search Committee for the Director, The Pennsylvania State University Women in Science and Engineering (WISE) Institute
- 2004 General Education Committee, Department of Meteorology
- 2001–2004 Strategic Planning Committee, Department of Meteorology
- 2003–2004 Faculty Search Committee, Department of Meteorology
- 2003 Faculty Search Committee, Department of Meteorology
- 2002–2003 Search Committee for the Environment Institute (now EESI) Director, College of Earth and Mineral Sciences

Prior Service in Academic Planning and Governance (continued)

- 2001–2002 Diversity Committee, College of Earth and Mineral Sciences
- 2000 Search Committee for the Diversity Officer, College of Earth and Mineral Sciences
- 1999 Search Committee for the Associate Director, Penn State WISE Institute
- 1997–1998 Committee Reviewing the Dean’s Office, College of Earth and Mineral Sciences
- 1995–1997 Faculty Adviser, Penn State Branch of the Association for Women in Science [AWIS]
- 1995–1996 Climate and Hydrology Theme Group Leader, Earth System Science Center
- 1994–1996 Undergraduate Academic Program Committee, Department of Meteorology
- 1994 Faculty Search Committee, Department of Meteorology
- 1993–1995 Scholarships Committee, College of Earth and Mineral Sciences
- 1993–1994 Computer Committee, Earth System Science Center

DIVERSITY

Improving the diversity of our professional science community (within and external to Penn State) has been one of my goals since arriving at Penn State.

I was the only member of the Advisory Board of the Penn State Women in Science & Engineering (WISE) Institute to serve from its inception in 1994 to its demise in 2011.

Major Diversity Initiatives

- 2021 – Convened the ICDS Justice, Equity, Diversity and Inclusion (JEDI) Committee
- 2021 – Co-Convenor, Social Justice Advisory Board, Office of the Senior Vice President for Research
- 2020 – Culture and Inclusion Cabinet (CIC), American Meteorological Society
- 2020 – Committee on Belonging, Department of Meteorology & Atmospheric Science
- 2018 – Instituted ICDS Scholars Program providing support to graduate students from underrepresented groups whose research incorporates advanced computational and/or data sciences
- 2001–2002 Diversity Committee, College of Earth and Mineral Sciences
- 2000 Search Committee for the Diversity Officer, College of Earth and Mineral Sciences

Undergraduate, Graduate & Faculty Initiatives – recruitment, skills building, retention

- Keynote speaker Graduate Women in Science (GWIS) National Conference
- Speaker, WISE Institute Voices Conference
- Organizing committee and session chair, WISE Challenges and Achievements Conference
- Organizing committee, WISE Challenges and Achievements Conference
- Panel chair, WISE Challenges and Achievements Conference

Initiatives Focused on High school students – science discovery

- Nittany Science Camp for 6–8 Grade girls
- Expanding Your Horizons workshops for 7–9 Grade girls
- Math Options workshops for Grade 7 girls

SELECTED OUTREACH EFFORTS

Outreach: University

Featured Scientist Sounds of Hurricanes

125th EMS Anniversary Research Spotlight, Penn State

Illustrating the active tropical cyclone year of 2005 interpreted through sonification.

<https://www.youtube.com/watch?v=mjVBW-oNQHc>

Leadership role in PSIEE/EESI science communications initiative

This collaborative effort is designed to provide faculty with the tools to communicate their science to a wide variety of stakeholder groups. Workshops have focused on communicating with media (2013, 2015, 2016, 2017) and policy makers (2014).

Outreach: Teachers and Students

Co-convener and lead trainer, NSF Cutting Edge Workshop for High School Science Teachers: The Hurricane-Climate Change Connection

2017 “Pop-up panel” Hurricane happenings (on hurricanes and climate change)

Penn State Science Policy Society

Department of Meteorology Weather Camps

Outreach: Government

Featured Speaker Super Storms – Hurricanes, Tornadoes and Space Weather

NSF Congressional Briefing, Senate Visitors Center, Capitol Hill (March 2015)

https://www.nsf.gov/news/news_summ.jsp?cntn_id=134516.

- Congressional visits to offices of the Pennsylvania representatives and senators.

Outreach: Public

Featured Scientist Penn State at the 2017 Arts Festival - Mark Ballora

Promoting STEAM (Science Technology Engineering Art and Math) with Sonification

<https://www.youtube.com/watch?v=wy93W-OF3n4>

Public seminars

- The Village @ Penn State (2017)
- CarbonEarth Workshop (2013)
- Penn State Research Unplugged Seminar Series (2012)
- Bruce Museum (Greenwich CT) Climate Change Lecture Series (2008)

Outreach: Media

Extreme Weather and Is there a Connection with Climate Change [September 2021]

Podcast interview with Rick Pantaleo, Voice of America

<https://www.voanews.com/a/6228437.html>

Coffee Pods Understanding big weather patterns and long-term climatic effects with meteorologist [February 2021]

Podcast interview with Holly Ransom

<https://omny.fm/shows/coffee-pods-with-holly-ransom/ep-77-professor-jenni-evans>

Monash Life Science and Technology In the eye of the storm

Feature on my career and impact: A passion for maths and tropical cyclones

<https://lens.monash.edu/@monash-life-2020/2020/11/18/1381743/passion-for-cyclones-and-maths>

WPSU Professor from Australia talks about the wildfires & climate change [February 2020]

Interview with Anne Danahy, Central PA public radio

<https://radio.wpsu.org/post/penn-state-meteorology-professor-australia-talks-about-wildfires-and-climate-change>

Outreach: Media (continued)

AMS Broadcasting Solutions: Making Climate Change Personal [January 2020]

Interviewing Gina McCarthy, 13th EPA Administrator, new CEO of NRDC

<https://www.youtube.com/watch?v=Lm71fk2Pji8>

Forbes Boston hosts America's largest weather conference next week – is that risky weatherwise? [January 2020; quoted]

<https://www.forbes.com/sites/marshallshepherd/2020/01/04/boston-hosts-americas-largest-weather-conference-next-week-is-that-risky-weatherwise/#6ae814455011>

Daily Collegian Australian Penn Staters discuss the fires scorching their home continent [January 2020; quoted]

https://www.collegian.psu.edu/news/campus/article_59ea9cc4-3e3f-11ea-8326-f31602ff6c74.html

Washington Post This isn't just a stupid story, it's a big story': An oral history of Sharpiegate [September 2019; quoted]

https://beta.washingtonpost.com/lifestyle/style/this-isnt-just-a-stupid-story-its-a-big-story-an-oral-history-of-sharpiegate/2019/09/13/504b63c4-d404-11e9-9610-fb56c5522e1c_story.html

Penn State Today Hurricane Dorian devastates Bahamas; scientists explain storm's unique evolution [September 2019; quoted]

https://news.psu.edu/story/586760/2019/09/06/impact/hurricane-dorian-devastates-bahamas-scientists-explain-storms-unique?utm_source=newswire&utm_medium=email&utm_term=587897_HTML&utm_content=09-12-2019-14-26&utm_campaign=EMS%20headlines%20issue

Freethink This Musician Transforms Scientific Data into Elaborate Melodies – in honor of Mark Ballora [August 2019; quoted]

<https://www.freethink.com/articles/listen-as-this-musician-transforms-scientific-data-into-elaborate-melodies>

Phys.org Researchers detail privacy-related legal, ethical challenges with satellite data [July 2019]

<https://phys.org/news/2019-07-privacy-related-legal-ethical-satellite.html>

Outreach: Media (continued)

Facebook Live Interviews with broadcast meteorologists from around the US

Topics include: AMS, climate change, early career, diversity, ...

American Meteorological Society (12-14 June 2019)

- Irene Sans CBM, Broadcast Meteorologist with WFTV in Orlando, FL
<https://www.facebook.com/ametsoc/videos/638345083300851/?t=0>
- Joe Murgo CBM, Chief Meteorologist with WTAJ in Altoona, PA
<https://www.facebook.com/ametsoc/videos/669770220116462/?t=0>
- AJ Fox, Broadcast Meteorologist at KSEE 24 in Fresno, CA
<https://www.facebook.com/ametsoc/videos/2669737266387824/?t=0>
- Rob Eicher CBM, Department of Applied Aviation Sciences, Embry-Riddle Aeronautical University, Daytona Beach, FL
<https://www.facebook.com/ametsoc/videos/305912456956534/?t=0>
- John Patrick, Broadcast Meteorologist at ABC7 in Fort Myers, FL
<https://www.facebook.com/ametsoc/videos/390512185141277/?t=0>
- Sandra Diaz, Broadcast Meteorologist at KFOX14/CBS4 in El Paso, TX
<https://www.facebook.com/ametsoc/videos/2024984204476718/?t=0>
- Maureen McCann CBM, Broadcast Meteorologist at Spectrum News 13 in Orlando, FL
<https://www.facebook.com/ametsoc/videos/460984461386592/?t=0>
- Shel Winkley CBM, Broadcast Meteorologist at KBTX in Bryan/College Station, TX
<https://www.facebook.com/ametsoc/videos/2079469382353327/?t=0>
- Paul Gross CBM, Broadcast Meteorologist at WDIV Detroit, MI
<https://www.facebook.com/ametsoc/videos/462710091130205/?t=0>

Weather Geeks Podcast A century of the American Meteorological Society

Weather Group Television [May 2019 – Jenni Evans on the AMS 100th anniversary]

<https://podcasts.apple.com/us/podcast/a-century-of-the-american-meteorological-society/id1373312240?i=1000439040138>

Newsweek We're the geeks who have protected the public from weather extremes for 100 years [March 2019 – Jenni Evans on the AMS 100th anniversary]

<https://www.newsweek.com/ams-100-weather-geeks-protecting-public-1359667>

Outreach: Media (continued)

Wired Our Ears are Unlocking an Era of Aural Data

Author: Clive Thompson; article describes work with Mark Ballora [February 2019, quoted]

https://www.wired.com/story/sonification-era-of-aural-data/?fbclid=IwAR01nayySGW22JhNRNCxpS1JsAyjxqdhvdIglEvogIUv_7VvpPqwGadAGnQ

Big Ten Network Sonification of Hurricanes – with Mark Ballora [February 2018]

<http://btn.com/2018/02/02/two-penn-state-researchers-are-changing-the-way-we-hear-hurricanes-btn-livebig/>

The Conversation Sonification of Hurricanes [co-author Mark Ballora; December 2017]

<https://theconversation.com/turning-hurricanes-into-music-can-listening-to-storms-help-us-understand-them-better-88203>

SciTech Now Managing Risk in a Changing Climate - SCRiM

WPSU Penn State Public Broadcasting [April 2017]

<http://wpsu.org/changingclimate/>

SciTech Now Sonification – with Mark Ballora [2017]

<https://wpsu.psu.edu/digital/scitech-now/sonification/>

Centre County Report Hurricanes and Climate Change

CommMedia [September 2017]

<http://www.centrecountyreport.com/centre-county-report/story/centre-county-report-september-8-2017>

Weather World Earth Beat: Climate Change

WPSU Penn State Public Broadcasting [August 2017]

<http://cms.met.psu.edu/WeatherWorld/earthbeat.html>

WPSU Penn State Public Broadcasting [August 2017]

<https://www.youtube.com/watch?v=2fP3G48ADno>

Outreach: Media (continued)

When Nature Strikes Science of Natural Hazards: Hurricanes [July 2015]

Collaboration between NBC Learn, NSF and The Weather Channel

<https://www.youtube.com/watch?v=CB0ybF6DvxI>

When Nature Strikes NBC Learn Twitter Chat [October 2015]

Incomplete list of local, national and international media interviews

Big Ten Network (sonification of hurricanes, 2018), The Conversation (sonification of hurricanes, 2017), Centre County Report (hurricanes & climate change, 2017), WeatherWorld (climate change, 2017), SciTech Now (sonification), SciTech Now (managing risk in a changing climate – SCRiM), Daily Collegian (sonification & hurricanes, 2017), When Nature Strikes (science of natural hazards: hurricanes, 2015 – film and twitter session), Weather or Not (Public Television hurricane feature, 2013), Nat Geo (research, 2013), ABC27 Harrisburg (hurricane season, 2013), Sirius radio: Stand Up with Pete Dominick (Hurricane Sandy landfall, 2012), Canadian Broadcast Corporation (hurricane season, 2011), The Patriot News (hurricane season, 2010), Weather World (hurricane feature, 2007), regional Australian radio (tropical cyclones and climate change).

PEDAGOGICAL CONTRIBUTIONS

Graduate Program

Graduate courses: Geophysical Fluid Dynamics (Meteo 520, required core course), Climate Modeling (Meteo 523), Advanced Tropical Meteorology (Meteo 525), Numerical Weather Prediction (Meteo 526), Tropical Meteorology (Meteo 597A), Tropical Climate (Meteo 597B)

Graduate seminars: 1) tropical cyclone motion; 2) tropical storm intensification; 3) tropical cyclogenesis; 4) tropical variability; 5) tropical climate change; 6) tropical cyclone sensitivity to climate change; 7) extratropical transition of tropical cyclones and research methods.

Graduate Programs: Contributed to the development of the *Dual Title in Climate Science* program. The program is open to all qualified graduate students, with coursework predominantly drawn from Meteorology and Atmospheric Science (coordinating department), Geosciences and Geography.

Undergraduate Program

Undergraduate courses: Freshman Seminar (EM SC 100S), Introductory Dynamics (Meteo 421), Advanced Dynamics (Meteo 422), Tropical Meteorology (Meteo 452)

Undergraduate Research Projects Supervised

I have supervised 29 undergraduate Honors theses, independent study, NSF REU, NSF Minority Undergraduate Research Experience (MURE), NASA WISER research projects.

Alvin Cheung (2021)

Department of Meteorology Honors Thesis (reader)

Julia Li (2021)

WISER Project: Analysis of energy transport in hurricanes.

NASA Women in Science and Engineering Research (WISER) Freshman Project.

Rebecca Beal (2020)

REU Paper: Growing food in a changing climate.

NSF Research Experience for Undergraduates

Cole Evans (2017)

REU Paper: A universal mixture model formulation for clustering ensemble forecasts of TC track & structure

NSF Research Experience for Undergraduates

Cole presented this work at the AMS Annual Meeting in 2018.

Daneisha Blair (2016)

Sensitivity of tropical cyclone intensity to ocean fluxes and atmospheric stability

NSF Research Experience for Undergraduates

Daneisha presented this work at the AMS Annual Meeting in 2017. She went on to graduate school at Florida State University.

Todd Emmenegger (2016)

Statistical methods for synthesis of ensembles of numerical hurricane forecasts in the service of operational hurricane forecasting

NSF Research Experience for Undergraduates

Todd presented his research at the AMS Annual Meeting in 2016.

Undergraduate Research Projects Supervised (continued)

Kelly Núñez Ocasio (2015)

Role of topography in the development of mesoscale convective systems in tropical West Africa

NSF Research Experience for Undergraduates

Kelly presented her research at the AMS Annual Meeting in 2016. She began her Doctoral research with me in Penn State's Meteorology program in August 2016.

Glorianne Rivera (2014)

Contrasting a non-developing African mesoscale convective system with the precursor to Hurricane Helene (2006)

NSF Research Experience for Undergraduates

Glorianne presented this work at the AMS Annual Meeting in 2015 and 2015 AGU Fall Meeting. Glorianne went on graduate school at the University of Miami.

Konstantine (Dean) Pryles (2013)

Role of coastal topography in pre-tropical cyclone disturbance formation

NSF Research Experience for Undergraduates

Dean presented our work on this NSF-funded research project at two national conferences in 2014.

Alicia Klees (2011 – 2012)

Importance of resolved scales in simulating tropical cyclogenesis

Department of Meteorology Honors Thesis (advisor)

Alicia's work on this NSF-funded research project required her to develop strong numerical modeling and data analysis skills. Alicia began her graduate studies in 2012.

Andrew Dzambo (2011 – 2013)

Hurricane Sandy forecast evaluation

Two undergraduate writing projects (Fall 2011 and Spring 2012) and independent study projects (Fall 2012 and Spring 2013).

Jennifer Van Der Horn (2011)

Impact of tropical cyclones on oil rigs in the Gulf of Mexico

Undergraduate independent study project (Fall 2011 and Spring 2012).

Undergraduate Research Projects Supervised (continued)

Casey Webster (2010 – 2011)

Compositing of ensemble partitions through path clustering

NSF Research Experience for Undergraduates (REU) (EMS College Marshall)

Observed relationships between tropical convection and sea surface temperatures

Undergraduate independent study research paper

Casey was the EMS College Marshall, the top student, in his in graduating class. This research resulted in the journal article, Evans and Webster (2014).

Allyson Clark (2009 – 2010)

Evacuation metrics of hurricane forecast accuracy for the 2004 and 2005 hurricane seasons

Department of Meteorology Honors Thesis (advisor)

Allyson went on graduate school at Colorado State in 2010.

Nikki Kinney (2009)

Metrics for evaluating numerical model physics configurations

NSF Research Experience for Undergraduates (REU)

In 2010, Nikki went on to pursue graduate studies at Texas A&M University.

Adam Arnold (2006 – 2008)

Using evacuation metrics as a measure of hurricane forecast accuracy

Funded research project (pre-graduate school)

Vorticity and landfalling hurricanes: A case study of Hurricane Ivan

Undergraduate independent study research paper

Alex Gonzales (2006 – 2008)

Hurricane forecasting in 19th and early 20th century USA and Cuba

MURE Freshman research project and NSF REU.

Alex translated some early writings of pioneering hurricane forecaster, Padre Benito

Viñes, and related the theory to his classes. He earned a Ph.D. in Atmospheric Sciences

at Colorado State. In 2019 Alex took a position of Assistant Professor in the Department of Geological and Atmospheric Sciences at Iowa State.

Kevin Grise (2004 – 2005)

Multi-sensor exploration of cloud and rain signatures for two landfalling tropical cyclones

Department of Meteorology Honors Thesis (advisor)

Kevin was EMS College Marshall

Undergraduate Research Projects Supervised (continued)

Cho Hin (Richard) Lam (2004 – 2006)

Evaluation of NHC forecasts for Hurricane Katrina (2005)

Undergraduate independent study research paper.

Effectiveness of the cyclone phase space in tracking structure evolution

Minority Undergraduate Research Experience Freshman research project.

Julie Malingowski (2004 – 2005)

In the life of a storm: Hurricane Charley and Hurricane Frances

Undergraduate independent study research paper.

Julie completed a Masters degree at the University of Alaska.

Christie Schultz (2003 – 2004)

Significant weather associated with tropical cyclone passage in New England

NASA Women in Science and Engineering Research (WISER) Freshman Project.

Sandra M McKinnon (2000 – 2003)

Tropical cyclone intensity measurement sensitivity to observing platform

NASA Women in Science and Engineering Research (WISER) Freshman Project.

Adam Lopes (2001 – 2002)

Contrasting the environments of extratropically transitioning tropical cyclones and midlatitude bombs

Department of Meteorology Honors Thesis (advisor)

Michael Pontrelli (1999)

Tropical tropopause response to the passage of a tropical cyclones

Undergraduate independent study

Gayathri Vijumakura (1998 – 1999)

The Navy Automated Tropical Cyclone Forecast System

NASA Women in Science and Engineering Research (WISER) Freshman Project

Gayathri developed an early website for the US Navy ATCF (Automated TC Forecasting) system. Her website formed the basis of the Navy's ATCF documentation.

Tommy Owens (1997 – 1998)

An index for tropical cyclogenesis

Undergraduate independent study

Tommy was a commercial fisherman who came to undergraduate studies later in life.

Undergraduate Research Projects Supervised (continued)

Jayma Hamilton (1997 – 1998)

Instrumentation in the GARP Atlantic Tropical Experiment [GATE 1975] field programme

NASA Women in Science and Engineering Research (WISER) Freshman Project
AMS History of Meteorology website; AMS 25th GATE Anniversary Workshop (1999).

Anneliese Sherer (1997 – 1998)

Scientists participating in the GATE field programme

NASA Women in Science and Engineering Research (WISER) Freshman Project
AMS History of Meteorology website; AMS 25th GATE Anniversary Workshop (1999).

Kathleen McKinley (1996 – 1998)

Timing of tropical cyclone peak intensity and storm recurvature

NASA Women in Science and Engineering Research (WISER) Freshman Project
This research resulted in the journal article Evans and McKinley (1998).

SELECTED CONFERENCE PAPERS

Student co-authors: graduate students and postdocs for whom I was major advisor for the published research; *all other students* (graduate committees or undergraduate advisees).

1. Kowaleski, Alex M., and **Jenni L. Evans**, 2021: Clustering and pruning multi-model ensembles to improve medium-range track forecasts. *34th AMS Tropical Meteorology and Tropical Cyclones Conference*, 10-14 May 2021, Zoom.
2. Kowaleski, Alex M., and **Jenni L. Evans**, 2021: Evaluating the radii at which ocean-air fluxes contribute to tropical cyclone intensity. *34th AMS Tropical Meteorology and Tropical Cyclones Conference*, 10-14 May 2021, Zoom.
3. Nuñez Ocasio, Kelly M., Alan Brammer, **Jenni L. Evans**, George S. Young, and Zachary L. Moon, 2021: Favorable Monsoon Environment over Eastern Africa for Subsequent Tropical Cyclogenesis of African easterly waves. *34th AMS Tropical Meteorology and Tropical Cyclones Conference*, 10-14 May 2021, Zoom.
4. Nuñez Ocasio, Kelly M., **Jenni L. Evans**, and G. S. Young, 2020: Favorable synoptic scale environment over Eastern Africa for prediction of tropical cyclogenesis. *100th AMS Annual Meeting*, 12-16 January 2020, Boston MA.

Selected Conference Papers (continued)

5. Polasky, Andrew, **Jenni L. Evans**, and Jose Fuentes, 2020: Downscaling climate model data for energy and crop modeling using self-organizing maps. *100th AMS Annual Meeting*, 12-16 January 2020, Boston MA.
6. Kowaleski, Alex M., and **Jenni L. Evans**, 2020: Use of mixture model clustering to inform tropical cyclone track forecasts. *100th AMS Annual Meeting*, 12-16 January 2020, Boston MA.
7. Nuñez Ocasio, Kelly M., **Jenni L. Evans** and George S. Young 2019: The Role of Mesoscale Convective Systems in the African Easterly Waves Tropical Cyclogenesis. *19th Cyclone Workshop, Synoptic and Mesoscale Meteorology*, 30 September-4 October, Seon, Germany.
8. **González-Alemán, Juan Jesús**, Alex M. Kowaleski, Raphael Portmann, **Jenni L. Evans**, Miguel Ángel Gaertner, Lance Bosart, Chris A. Davis, Michael Sprenger, and Heini Wernli, 2019: Exploiting ensemble forecasts to research on the tropical transitions of Hurricane Alex (2016) and Medicane Zorbas (2018). *19th Cyclone Workshop*, 30 September-4 October, Seon, Germany.
9. Kowaleski, Alex M., and **Jenni L. Evans**, 2019: Use of a Convection-Permitting WRF Ensemble to Explore the Relationship between Track and Rainfall Associated with Hurricane Harvey (2017). *Tropical Cyclones and Extreme Monsoon Precipitation: Prediction, Impacts, and Communication*, *99th AMS Annual Meeting*, 7-11 January 2019, Phoenix, AZ.
10. Kowaleski, Alex M., Rebecca E. Morss, David A. Ahijevych, Kathryn R. Fossell, **Jenni L. Evans**, 2019: Use of a WRF-ADCIRC Ensemble to Explore Storm Surge Predictability Associated with Hurricane Irma (2017). *Tropical Cyclones and Extreme Monsoon Precipitation: Prediction, Impacts, and Communication*, *99th AMS Annual Meeting* (5.5), 7-11 January 2019, Phoenix, AZ.
11. Ballora, Mark, **Jenni L. Evans**, and Alex M. Kowaleski, 2019: Listening to How Storms Grow – Sonifications of Tropical Storm Datasets. *International Conference on Drawdown*, 16-18 September 2019, University Park, PA.
12. Nuñez Ocasio, Kelly M., Holly L. Hamilton and **Jenni L. Evans**, 2019: African Easterly Wave-Mesoscale Convective Coupled Systems that are Potential Candidates for Tropical Cyclogenesis. 7th Symposium on the Madden-Julian Oscillation and Sub-Seasonal Monsoon Variability (4.3), *99th AMS Annual Meeting*, 7-11 January 2019, Phoenix, AZ.

Selected Conference Papers (continued)

13. Nuñez Ocasio, Kelly M., Holly L. Hamilton and **Jenni L. Evans**, 2019: Topographic Influence on African Easterly Wave Energetics and Convective Interactions. 7th Symposium on the Madden-Julian Oscillation and Sub-Seasonal Monsoon Variability, *99th AMS Annual Meeting*, 7-11 January 2019, Phoenix, AZ.
14. Polasky, Andrew, Holly L. Hamilton, Jenni L. Evans, and Jose D. Fuentes, 2019: Statistical Downscaling over Illinois Using Self-Organizing Maps. *32nd Conference on Climate Variability and Change (12B.4)*, 7-11 January 2019, Phoenix, AZ.
15. González-Alemán, Juan Jesús, Jenni L. Evans, Alex M. Kowaleski, and Miguel Ángel Gaertner, 2018: Factors affecting the structural evolution and predictability of the tropical transition of Hurricane Alex (2016). *European Geosciences Union General Assembly 2018*, EGU2018-475, Vienna, Austria.
16. Evans, Cole, Alex M. Kowaleski and **Jenni L. Evans**, 2018: Multi-model Ensemble Track Clustering to Improve Tropical Cyclone Forecasting. *98th AMS Annual Meeting Student Conference (S181)*, 7-11 January 2018, Austin, TX.
17. **Evans, Jenni L.**, 2017: Attacking Hurricane Forecasting using High Performance Computing. *97th AGU Fall Meeting*, 11-15 December 2017, New Orleans, LA.
18. Ballora, Mark, and **Jenni L. Evans**, 2017: Spaghetti of Storms: An Installation of Tropical Storm Data Sonifications. *International Conference of Auditory Display 2017 (ICAD)*, 20-23 June 2017, University Park, PA.
19. **Evans, Jenni L.**, and Alex M. Kowaleski, 2017: Using Regression Mixture Model Clustering to Partition Tropical Cyclone Track Forecasts from Ensemble Prediction Systems. *97th AMS Annual Meeting*, 22-26 January 2017, Seattle, WA.
20. Kowaleski, Alex M., and **Jenni L. Evans**, 2017: Sensitivity of the Structural Evolution of Hurricane Sandy to Variations in Storm Track. *97th AMS Annual Meeting*, 22-26 January 2017, Seattle, WA.
21. Blair, Daneisha, Alex M. Kowaleski, and **Jenni L. Evans**, 2017: Observed Relationship between Sea Surface Temperature and the Maximum Intensity of Tropical Cyclones. *97th AMS Annual Meeting Student Conference (S174)*, 22-26 January 2017, Seattle, WA.
22. Emmenegger, Todd W., Michael E. Mann, **Jenni L. Evans**, and Gregory S. Jenkins, 2017: Empirical Orthogonal Function Analysis of Cape Verde Cyclogenesis in CMIP5 Models. *97th AMS Annual Meeting Student Conference (S181)*, 22-26 January 2017, Seattle, WA.

Selected Conference Papers (continued)

23. **Evans, Jenni L.**, Juan Jesús González-Alemán and Alex M. Kowaleski, 2016: Synoptic Factors Affecting Structure Predictability of Hurricane Alex (2016). *American Geophysical Union (AGU) Fall Meeting*, December 2016, San Francisco, CA.
24. **Evans, Jenni L.**, and Alex M. Kowaleski, 2016: Path clustering of a multi-model ensemble to infer causes of differences in the motion of hurricane Sandy. *32nd AMS Tropical Meteorology and Tropical Cyclones Conference*, 17-22 April 2016, San Juan, PR.
25. Kowaleski, Alex M., and **Jenni L. Evans**, 2016: A reformulated tropical cyclone potential intensity framework incorporating energy production along a radial trajectory. *32nd AMS Tropical Meteorology and Tropical Cyclones Conference*, 17-22 April 2016, San Juan, PR.
26. **Evans, Jenni L.**, and Alex M. Kowaleski, 2016: Using path clustering of a multi-model ensemble to diagnose causes of differences in the motion of Hurricane Sandy. *96th AMS Annual Meeting*, 10-14 January 2016, New Orleans, LA.
27. Kowaleski, Alex M., and **Jenni L. Evans**, 2016: Clustering of multi-model Hurricane Sandy track and cyclone phase space forecasts using a regression mixture model. *96th AMS Annual Meeting*, 10-14 January 2016, New Orleans, LA.
28. Núñez Ocasio, Kelly M., Holly Hamilton, **Jenni L. Evans** and Jose Fuentes, 2016: A 16-year Climatology of the West African Offshore Rainfall Maximum. *96th AMS Annual Meeting*, 10-14 January 2016, New Orleans, LA.
29. **Evans, Jenni L.**, Alex M. Kowaleski and *Julia Keller*, 2015: Clustering TIGGE forecasts for extratropical transition: A comparison study. *PANDOWAE Final Symposium: Progress and Future Directions of Research on Predictability and Dynamics of Midlatitude Weather Systems*. 18-21 May 2015, Karlsruhe, Germany.
30. González-Alemán, Juan Jesús, Francisco Valero, Francisco Martín-León and **Jenni L. Evans**, 2015: Analysis of Subtropical Cyclones (STCs) in the Northeastern Atlantic Ocean. *15th European Meteorological Society Annual Meeting (15th EMS/12th ECAM)*, Vol. 12, EMS2015-238, Sofia, Bulgaria, http://presentations.copernicus.org/EMS2015-238_presentation.pdf.
31. *Rivera, Glorianne M.*, Holly L. Hamilton, **Jenni L. Evans**, and Jose D. Fuentes, 2015: Contrasting a non-developing African mesoscale convective system with the precursor to Hurricane Helene (2006). *95th AMS Annual Meeting Student Conference*, 2-8 Jan. 2015, Phoenix, AZ.

Selected Conference Papers (continued)

32. **Evans, Jenni L., Alex Kowaleski**, 2014: Mixture -based partitioning of operational ensemble forecasts for hurricane Sandy (2012). *World Weather Open Science Conference (WWOS) 2014*, 16-21 August, Montreal, Canada.
33. **Kowaleski, Alex M., and Jenni L. Evans**, 2014: Thermodynamic and flux observations of the tropical cyclone surface layer. *31st AMS Tropical Meteorology and Tropical Cyclones Conference*, 31 March-4 April, San Diego, CA.
34. **Evans, Jenni L., and Alex Kowaleski**, 2014: Effects of Observed Conditions on Evaluation of Tropical Cyclone Potential Intensity. *31st AMS Tropical Meteorology and Tropical Cyclones Conference*, 31 March-4 April 2014, San Diego, CA.
35. **Pryles, Konstantine, Jenni L. Evans, Jose D. Fuentes and Holly Hamilton**, 2014: Role of coastal topography in pre-tropical cyclone disturbance formation. *31st AMS Tropical Meteorology and Tropical Cyclones Conference*, 31 March-4 April 2014, San Diego, CA.
36. **Pryles, Konstantine, Jenni L. Evans, Jose D. Fuentes and Holly Hamilton**, 2014: Role of coastal topography in pre-tropical cyclone disturbance formation. *94th AMS Annual Meeting Student Conference*, 2-6 February 2014, Atlanta, GA.
37. **Evans, Jenni L.**, 2011: Variations of convection under a changing climate and implications for climate change. *XXV IUGG General Assembly Joint symposium: (J-M10) Monsoons, Tropical Cyclones and Tropical Dynamics*, 28 June - 7 July 2011, Melbourne, Australia. (Invited).
38. **Bright, Kimberley D., Jon M. Nese and Jenni L. Evans**, 2011: A Newton story: Overcoming barriers to communicating science to the public. *90th AMS Annual Meeting*, 24-28 January 2011, Seattle, WA.
39. **Evans, Jenni L.**, 2010: Environmental impacts on tropical cyclone structure and intensity change. Report to the *7th World Meteorological Organisation (WMO) International Workshop on Tropical Cyclones (IWTC-VII)*, November 2010, La Réunion. (Invited).
40. **Evans, Jenni L., Francesca Chiaromonte, and Prabhani Kuruppumullage Don**, 2010: Distillation of key storm evolution characteristics from ensemble forecasts through path clustering. *29th AMS Tropical Meteorology and Tropical Cyclones Conference*, 10-14 May, Tucson, AZ.

Selected Conference Papers (continued)

41. Laing, Arlene, **Jenni L. Evans**, and Mick Pope, 2010: What's new with the online textbook for tropical meteorology? *29th AMS Tropical Meteorology and Tropical Cyclones Conference*, 10-14 May, Tucson, AZ.
42. Hernandez, Michael, and **Jenni L. Evans**, 2010: The Effects of Latent Heating on the Extratropical Transition of Typhoon Sinlaku. *29th AMS Tropical Meteorology and Tropical Cyclones Conference*, 10-14 May, Tucson, AZ.
43. *Clark, Alison*, and **Jenni L. Evans**, 2010: A Study of Cost of Hurricane Evacuations in Florida. *90th AMS Annual Meeting*, 18-22 January 2010, Atlanta, GA.
44. *Arnold, Adam*, and **Jenni L. Evans**, 2009: Vulnerability metrics of hurricane forecast accuracy. *89th AMS Annual Meeting*, 11-15 January 2009, Phoenix, AZ.
45. **Evans, Jenni L.**, and Aviva Braun, 2008: A methodology for identifying subtropical cyclones in the South Atlantic. *28th AMS Tropical Meteorology and Tropical Cyclones Conference (P1C.2)*, 28 April-2 May 2008, Orlando, FL.
46. Schreiber-Abshire, Wendy **Jenni L. Evans**, and Arlene Laing, 2008: An online textbook for tropical meteorology. *28th AMS Tropical Meteorology and Tropical Cyclones Conference (P1H.4)*, 28 April-2 May 2008, Orlando, FL.
47. *Sabbatelli, Thomas A.*, Michael E. Mann, Sonya K. Miller and **Jenni L. Evans**, 2008: Semi-Empirical Projections of Future Atlantic Tropical Cyclone Activity. *AGU Fall Meeting*, December 2008, San Francisco, CA.
48. **Evans, Jenni L.**, and Daniel Veren, 2007: Analysis of ensemble forecasts of tropical cyclone structure through extratropical transition. THORPEX Special Session (3.6), AMS Forum on Climate Change Manifested by Changes in Weather, *87th AMS Annual Meeting*, 14-19 January 2007, San Antonio, TX. (Invited).
49. **Evans, Jenni L.**, 2006: Observing and forecasting extratropical transition. *6th WMO International Workshop on Tropical Cyclones (IWTC-VI)*, 18 – 30 November 2006, San Jose, Costa Rica. (Invited).
50. **Evans, Jenni L.**, Justin M. Arnett, and Francesca Chiaromonte, 2006: Phase space-based evaluation of numerical forecasts of cyclone structure evolution. *27th AMS Tropical Meteorology and Tropical Cyclones Conference (1B.4)*, 24-28 April 2006, Monterey, CA.
51. Guishard, Mark A., and **Jenni L. Evans**, 2006: A climatology of North Atlantic subtropical storms. *27th AMS Tropical Meteorology and Tropical Cyclones Conference (4A.1)*, 24-28 April 2006, Monterey, CA.

Selected Conference Papers (continued)

52. Hart, Robert E., **Jenni L. Evans**, and Clark Evans, 2006: Synoptic Composites of the Extratropical Transition Lifecycle of North Atlantic Tropical Cyclones: Factors Determining Post-Transition Evolution. *27th AMS Tropical Meteorology and Tropical Cyclones Conference (3A.1)*, 24-28 April 2006, Monterey, CA.
53. Moyer, Adam, and **Jenni L. Evans**, 2006: A study of current datasets for outer wind radii. *27th AMS Tropical Meteorology and Tropical Cyclones Conference (1B.7)*, 24-28 April, Monterey, CA.
54. **Evans, Jenni L.**, and Robert E. Hart, 2005: Workshop on Operational uses of the Cyclone Phase Space (CPS). *3rd WMO International Workshop on Extratropical Transition (IWET-III)*, 1 – 9 December 2005, Perth, Australia. (Invited).
55. Hart, Robert E., **Jenni L. Evans**, and Clark Evans, 2005: Synoptic composites of the extratropical transition lifecycle of North Atlantic tropical cyclones: Factors determining post-transition evolution. *3rd WMO International Workshop on Extratropical Transition (IWET-III)*, 1 – 9 December 2005, Perth, Australia (Invited).
56. **Evans, Jenni L.**, Justin M. Arnott, and Francesca Chiaromonte, 2005: Evaluation of cyclone structure evolution in global model forecasts using cluster analysis. *1st THORPEX International Science Symposium*, 6-10 December 2004, Montreal, Canada (Invited).
57. **Evans, Jenni L.**, and Justin M. Arnott, 2004: Analysis of operational model forecast trends in extratropical transition storm structure. *26th AMS Tropical Meteorology and Tropical Cyclones Conference*, 3-7 May 2004, Miami Beach, FL.
58. **Evans, Jenni L.**, and Mark P. Guishard, 2004: A proposed potential vorticity mechanism for sub-tropical genesis and tropical transition. *26th AMS Tropical Meteorology and Tropical Cyclones Conference*, 3-7 May 2004, Miami Beach, FL.
59. Hart, Robert E., and **Jenni L. Evans**, 2004a: Synoptic composites of the extratropical transition lifecycle of North Atlantic TCs as defined within cyclone phase space. *26th AMS Tropical Meteorology and Tropical Cyclones Conference*, 3-7 May 2004, Miami Beach, FL.
60. Hart, Robert E., and **Jenni L. Evans**, 2004b: 2001-2003 realtime use of cyclone phase diagrams to improve structural diagnosis and forecasting. *26th AMS Tropical Meteorology and Tropical Cyclones Conference*, 3-7 May 2004, Miami Beach, FL.

Selected Conference Papers (continued)

61. Pratt, Aaron S., and **Jenni L. Evans**, 2004: An evaluation of the Global Forecast System (GFS) and Navy Operational Global Atmospheric Prediction System (NOGAPS) forecasting skill of tropical cyclogenesis. *26th AMS Tropical Meteorology and Tropical Cyclones Conference*, 3-7 May 2004, Miami Beach, FL.
62. Arnott, Justin M., and **Jenni L. Evans**, 2003: Composite evolution of ET using cluster analysis. *2nd WMO International Workshop on Extratropical Transition (IWET-II)*, 17-21 November 17-21, Halifax, NS.
63. **Evans, Jenni L.**, and Justin M. Arnott, 2003: Characterization of extratropical transition using cluster analysis. *2nd WMO International Workshop on Extratropical Transition (IWET-II)*, 17-21 November 17-21, Halifax, NS. (Invited).
64. Hart, Robert E., and **Jenni L. Evans**, 2003: Synoptic composites of the ET lifecycle of North Atlantic TCs as defined within a cyclone phase space. *2nd WMO International Workshop on Extratropical Transition (IWET-II)*, 17-21 November 17-21, Halifax, NS.
65. **Evans, Jenni L.**, 2003: Tropical cyclone formation. *Il Simposium Internacional Sobre Ciconología Tropical "Padre Benito Viñes S. J. In Memoriam"* (co-sponsored by the WMO). 3-8 March 2003, Havana, Cuba. (Invited).
66. **Evans, Jenni L.**, 2003: Tropical cyclones and their effects on New England, Canada, and Europe. *New Perspectives on Catastrophe Risk*, 10-13 February 2003, Las Palmas CA. (Keynote).
67. **Evans, Jenni L.**, and Justin M. Arnott, 2003: Characterization of cyclone lifecycle evolution using cluster analysis. *Joanne and Bob Simpson Symposium, 83rd AMS Annual Meeting*, 12-13 February 2003, Long Beach CA.
68. Robertson, David, and **Jenni L. Evans**, 2003: Quantitative Precipitation Forecast (QPF) skill for selected tropical cyclone forecast models during Hurricane Irene (1999). *17th AMS Conference on Hydrology*, 12-13 February 2003, Long Beach CA.
69. **Evans, Jenni L.**, 2002: Tropical cyclogenesis: regional, mesoscale and intraseasonal factors. *5th WMO International Workshop on Tropical Cyclones (IWTC-V)*, 1-13 December 2002, Cairns, Australia. (Invited).
70. **Evans, Jenni L.**, Christopher S. Velden, Lance F. Bosart, John Molinari and Peter G. Black, 2002: Hurricane Michael (2000) – The “Two-way TC.” *25th AMS Tropical Meteorology and Tropical Cyclones Conference*, 29 April-3 May, San Diego CA.

Selected Conference Papers (continued)

71. Bosart, Lance F., Peter G. Black, **Jenni L. Evans**, John Molinari and Christopher S. Velden, 2002: The double transition of Hurricane Michael (2000): Baroclinic to tropical to baroclinic. *25th AMS Tropical Meteorology and Tropical Cyclones Conference*, 29 April-3 May, San Diego CA.
72. Hart, Robert E., and **Jenni L. Evans**, 2002: Phase space characterization of the stages of cyclone development. *Australian Meteorological and Oceanographic Society [AMOS] 9th National Conference*, Melbourne University, 18-20 February 2002, Melbourne, Australia.
73. Black, Peter, Lance Bosart, John Molinari, Christopher Velden and **Jenni L. Evans**, 2001: Hurricane Michael: The two-way TC. *18th AMS Weather Analysis and Forecasting Conference*, July 2001, Fort Lauderdale, FL.
74. **Evans, Jenni L.**, 2001: Tropical cyclone sensitivities to differing climate regimes. *12th AMS Symposium on Global Change and Climate Variations*, 14-18 January, Albuquerque, NM.
75. **Evans, Jenni L.**, Robert E. Hart and Christopher S. Velden, 2000: Improved data assimilation in the study of Hurricane Floyd (1999). *24th Conference on Hurricanes and Tropical Meteorology*, May 2000, Fort Lauderdale FL.
76. **Evans, Jenni L.**, 2000: Assimilation of satellite-derived winds into the Community Hurricane Modeling System (CHUMS) at Penn State. *International Satellite Winds Workshop*, 28 February-3 March 2000, Lorne, Australia.
77. **Evans, Jenni L.**, 2000: A climatology of convective weather systems in the global tropics. *Australian Meteorological and Oceanographic Society (AMOS) Annual Meeting*, 7-9 February 2000, Melbourne, Australia.
78. Tsakraklides, Giorgos, and **Jenni L. Evans**, 2000: Satellite-based inputs for quantitative precipitation forecasting over the United States Mid-Atlantic region. *10th AMS Conference on Satellite Meteorology*, 9-14 January 2000, Long Beach, CA.
79. **Evans, Jenni L.**, 1999: Current hurricane research and AMS hurricane activities. *U.S. National Interdepartmental Hurricanes Conference*, 8-10 February 1999, Biloxi, MI. (Invited opening speaker)
80. **Evans, Jenni L.**, 1999: Satellite-based inputs for Quantitative Precipitation Forecasting (QPF) over the United States Mid-Atlantic Region. *1999 Meteorological Satellite Users' Conference*, September 1999, Copenhagen, Denmark.

Selected Conference Papers (continued)

81. **Evans, Jenni L.**, 1999: Climatology and impacts of extratropical transition of tropical cyclones in the Atlantic basin. *1st WMO Workshop on the Extratropical Transition of Tropical Cyclones (IWET-I)*, May 1999, Kaufbeuren, Germany. (Invited).
82. **Evans, Jenni L.**, and Robert E. Hart, 1999: A climatology of extratropical transition of tropical cyclones in the North Atlantic Ocean. *23rd Conference on Hurricanes and Tropical Meteorology*, January 1999, Dallas, TX.
83. **Evans, Jenni L.**, 1998: Climatology of convective weather systems in the tropical Indian Ocean. *American Geophysical Union (AGU) Fall Meeting*, December 1998, San Francisco, CA.
84. **Evans, Jenni L.**, and Robert E. Hart, 1998: Extratropical transition of tropical cyclones. Part I: Climatology and theoretical breakdown. *Workshop on Extratropical Transition of Tropical Cyclones*, Risk Prediction Initiative (RPI), Bermuda Biological Station, September 1998, St Georges, Bermuda. (Invited).
85. **Evans, Jenni L.**, 1998: Regional climate change assessment in the tropics using summary measures of monsoon and tropical cyclone variability. *Aspen Global Change Institute*, August 1998, Aspen CO. (Invited)
86. **Evans, Jenni L.**, Francine A. Jaskiewicz and Robert E. Shemo, 1998: Satellite identification of systems evolving within the Madden-Julian Oscillation. *AMS/Eumetsat Conference on Satellite Meteorology and Oceanography*, May 1998, Paris, France.
87. **Evans, Jenni L.**, 1997: Detection of tropical cyclogenesis potential via large-scale diagnostics: Implications for climate change. *American Geophysical Union (AGU) Fall Meeting*, December 1997, San Francisco CA.
88. **Evans, Jenni L.**, 1997: Tropical cyclone blobs: Intensity and motion changes. *1997 IAMAS/IAPSO*, 1-9 July 1997, Melbourne, Australia.
89. **Evans, Jenni L.**, Francine A. Jaskiewicz and Robert E. Shemo, 1997: Pacific variation of organized tropical convection. *1997 IAMAS/IAPSO*, 1-9 July 1997, Melbourne, Australia.
90. **Evans, Jenni L.**, and *Kathleen S. McKinley*, 1997: Maximum tropical cyclone intensity and recurvature. *22nd AMS Conference on Hurricanes and Tropical Meteorology*, 19-23 May 1997, Fort Collins, CO.

Selected Conference Papers (continued)

91. **Evans, Jenni L.**, Francine A. Jaskiewicz and Robert E. Shemo, 1997: Potential significance of organized tropical convection. *13th AMS Conference on Hydrology*, 2-7 February 1997, Long Beach, CA.
92. **Evans, Jenni L.**, 1996: Tropopause deformation ahead of a tropical cyclone. *Tropical Cyclone Motion Workshop*, Bureau of Meteorology, December 1996, Melbourne, Australia.
93. **Evans, Jenni L.**, Francine A. Jaskiewicz and Robert E. Shemo, 1996: Pacific and Atlantic variation of organized tropical convection. *1996 Meteorological Satellite Users' Conference*, 399-406pp, 16-20 September 1996, Vienna, Austria.
94. Drury, Sytske, and **Jenni L. Evans**, 1996: Non-hydrostatic tropical cyclone intensification modeling using MM5. *11th Numerical Weather Prediction Conference*, 19-23 August, Norfolk, VA.
95. **Evans, Jenni L.**, *Liyang Qian*, George S. Young and William M. Frank, 1996: Integration of a gust front parameterization into ICE-T. *Atmospheric Radiation Measurement (ARM) Science Team Meeting*, March, San Antonio, TX.
96. **Evans, Jenni L.**, 1995: Seasonal variation of organized tropical convection. *21st Hurricanes and Tropical Meteorology Conference*, 24-28 April 1995, Miami FL.
97. **Evans, Jenni L.**, George S. Young and William M. Frank, 1995: An integrated parameterization system for GCMs. *ARM Science Team Meeting*, March 1995, San Antonio, TX.
98. **Evans, Jenni L.**, 1995: Regional climate studies and tropical cyclones. Elements of Change 1994, *Aspen Global Change Institute*, Report on 1994 Workshops, S. J. Hassol and J. Katzenberger (Eds), 156-157, Aspen CO. (Invited).
99. **Evans, Jenni L.**, 1994: *Workshop on Satellites and Numerical Modeling*, Florida State University, November 1994, Tallahassee, FL.
100. Shemo, Robert E., and **Jenni L. Evans**, 1994: Precipitation signatures of various classes of organized convection in the Atlantic Ocean. *7th Conference on Satellite Meteorology and Oceanography*, 6-10 June 1994, Monterey, CA.
101. *Lambert, Winifred C.*, **Jenni L. Evans** and *Tanya Spero*, 1994: Connecting girls to science: Projects at Penn State. *3rd Symposium on Education*, 23-28 January 1994, Nashville, TN.

Selected Conference Papers (continued)

102. **Evans, Jenni L.**, and Robert J. Allan, 1993: Changes in the structure of the Australasian summer monsoon and tropical cyclone activity in extreme phases of the El Niño-Southern Oscillation. *20th Hurricanes and Tropical Meteorology Conference*, 10-14 May, San Antonio, TX.
103. **Drury, Sytske**, and **Jenni L. Evans**, 1993: Sea surface temperature and CAPE: Importance for tropical cyclone intensity. *4th International Conference on Southern Hemisphere Meteorology and Oceanography*, 29 March-2 April 1993, Hobart, Australia.
104. **Evans, Jenni L.**,1991a: Structure changes of an axisymmetric vortex under an imposed absolute vorticity gradient. *Bulletin of the American Physical Society*, **36**, 2703, Eugene, OR.
105. **Evans, Jenni L.**, 1991b: Tropical cyclone sensitivity to sea surface temperatures. *19th Hurricanes and Tropical Meteorology Conference*, 6-10 May 1991, Miami, FL.
106. **Evans, Jenni L.**,1988: Asymmetric vortex evolution in barotropic tropical cyclone motion. *International Conference on Tropical Meteorology*, University of Queensland, July 1988, St Lucia, Australia.
107. **Evans, Jenni L.**, 1987: Development of vortex asymmetries in a background vorticity gradient. *40th Annual Meeting APS Division of Fluid Mechanics*, American Physical Society, November 1987, University of Oregon, Eugene, OR.