

KELLY LOMBARDO

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APPOINTMENTS

2019-present	Associate Professor	The Pennsylvania State University, University Park, PA
2019-19	Associate Professor	University of Connecticut, Groton, CT
2013-19	Assistant Professor	University of Connecticut, Groton, CT
2012-13	Adjunct Professor	Nassau Community College, Garden City, NY
2011-13	Postdoctoral Research Associate	Stony Brook University, Stony Brook, NY
2011-12	Science Writing Associate	New York Academy of Sciences, New York, NY

PROFESSIONAL PREPARATION

Stony Brook University	Stony Brook, NY	Atmospheric Science	Ph.D.	2011
University at Albany, SUNY	Albany, NY	Atmospheric Science	M.S.	2004
University at Albany, SUNY	Albany, NY	Atmospheric Science	B.S.	2001

HONORS AND AWARDS

Outstanding Early Career Award, American Meteorological Society Committee on Mesoscale Processes, 2020

Awarded to those who have made significant contributions to the discipline and is on a path to becoming a science leader in the community.

National Science Foundation Faculty Early Career Development Program (CAREER) Award, 2018

The National Science Foundation's most prestigious award for early-career faculty who have the potential to serve as academic role models in research and education.

Office of Naval Research Young Investigator Program (YIP) Award, 2017

For outstanding faculty members of institutions of higher education to support their research, and to encourage their teaching and research careers.

FUNDED PROPOSALS

The Baltimore Social-Environment Collaborative Integrated Field Laboratory (IFL). Co-Investigator, with K. J. Davis (PI), R. Azari (Co-I), S. E. Clark (Co-I), J. M. Duncan (Co-I), C. E. Forest (Co-I), A. Hajimichael (Co-I), L. D. Lulo (Co-I), L. McPhillips (Co-I), N. L. Miles (Co-I), R. G. Najar (Co-I), R. E. Nichols (Co-I), E. Obonyo (Co-I), Y. Pan (Co-I), W. Peng (Co-I), S. J. Richardson (Co-I), K. Sznajder (Co-I), H. Wu (Co-I), W. Zuo (Co-I).
Department of Energy. \$6,371,823; 9/1/22-8/31/27.

Understanding the Life Cycle of Deep Convective Storms Traversing Mountains Using CACTI Observations. Principal Investigator. Department of Energy; \$771,648; 8/1/22-7/31/25.

Experiment of Sea Breeze Convection, Aerosols, Precipitation, and Environment (ESCAPE). Co-Investigator, with P. Kollias (PI), M. Kumjian (Co-I), E. Bruning (Co-I), T. Logan (Co-I), Z. Lebo (Co-I), S. van den Heever (Co-I), G. McFarquhar (Co-I), G. Roberts (Co-I), R. Shaw (Co-I). National Science Foundation; \$3 M/\$360,713; 1/1/20-12/31/23.

Exploring the Influence of Surface Heterogeneities on Low-level Vertical Vorticity and Polarimetric Radar Signatures in Idealized Quasi-linear Convective Systems. Principal Investigator with M. Kumjian (Co-I). National Oceanic and Atmospheric Administration; \$241,615; 9/19-8/23.

CAREER: The Response of Coastal Squall Line Dynamics to Climate Change. Principal Investigator. National Science Foundation; \$583,701; 9/18-8/23.

Connecticut Physical Climate Science Assessment Report (PSCAR). Co-Investigator with A. Seth (PI), G. Wang (PI), C. Kirchoff (co-I), A. Richard (co-I), S. Stephenson (Co-I). CT Department of Energy and Environmental Protection, Connecticut Institute for Resilience and Climate Adaptation; \$79,000/2 weeks academic salary; 7/17-9/18.

YIP: Advancements in the Prediction of Littoral Quasi-linear Mesoscale Convective Systems. Principal Investigator. Office of Naval Research; \$473,433; 6/17-5/21.

Modification of Mesoscale Convective Systems Traversing the Maritime Continent. Principal Investigator. Office of Naval Research; \$189,998; 6/16-5/21.

Toward a Further Understanding and Improved Forecasting of Coastal Quasi-linear Convective Systems. Principal Investigator. National Science Foundation; \$291,988; 7/15-6/20.

COOPERATIVE INSTITUTES/AGREEMENTS

Goddard Earth Sciences Technology and Research II (GESTAR II), National Aeronautics and Space Administration Cooperative Agreement, 1 December 2021.

Cooperative Institute for Severe and High-Impact Weather Research and Operations, National Oceanic and Atmospheric Administration, 1 October 2021.

REFEREED PUBLICATIONS

**indicates a graduate student or postdoctoral scholar in Lombardo's research group*

2022

Lombardo, K., and M. R. Kumjian: Observations of the Discrete Propagation of a Mesoscale Convective System During RELAMPAGO-CACTI, *Monthly Weather Review*, 150, 2111-2138. DOI: 10.1175/MWR-D-21-0265.1

2021

Kumjian, M. R., K. Lombardo, and S. Loeffler: The evolution of hail production in simulated supercell storms. *Journal of the Atmospheric Sciences*, **78**, 3417-3440. DOI: 10.1175/JAS-D-21-0034.1

Wu*, F., K. Lombardo: Precipitation enhancements in squall lines moving over mountainous coastal regions. *Journal of the Atmospheric Sciences*, **78**, 3089-3133. DOI: 10.1175/JAS-D-20-0222.1

2020

Lombardo, K.: Squall line response to coastal mid-Atlantic thermodynamic heterogeneities. *Journal of the Atmospheric Sciences*, **77**, 4143-4170. DOI: 10.1175/JAS-D-0044.1

Kumjian, M. R., **K. Lombardo:** A hail growth trajectory model for exploring the environmental controls on hail size: Model physics & idealized tests. *Journal of the Atmospheric Sciences*, **77**, 2765-2791. DOI: 10.1175/JAS-D-20-0016.1

Kumjian, M., R., K. A. Bowley, P. M. Markowski, **K. Lombardo**, Z. J. Lebo, P. Kollias: Snowflake selfies: A low-cost, high-impact approach toward student engagement in scientific research (with their smartphones). *Bulletin of the American Meteorological Society*, 101(6), E917-E935, DOI: 10.1175/BAMS-D-19-0096.1

Pucillo, A., M. M. Miglietta, **K. Lombardo**, and A. Manzato: A simple analytical model applied to a bow echo-like storm in Northeastern Italy. *Meteorological Applications*, 1-18, DOI: 10.1002/met.1868

2019

Kirchhoff, C. J., J. J. Barsugli, G. L. Galford, A. V. Karmalkar, **K. Lombardo**, S. Stephenson, M. Barlow, A. Seth, and G. Wang: Climate assessments for local action. *Bulletin of the American Meteorological Society*, **100**, 2147-2152. DOI:10.1175/BAMS-D-18-0138.1

2018

K. Lombardo, E. Sinsky*, J. Edson, M. M. Whitney, and Y. Jia: Sensitivity of offshore surface fluxes and sea breezes to the spatial distribution of sea-surface temperature. *Boundary-Layer Meteorology*, **166**, 475-502. DOI: 10.1007/s10546-017-0313-7

K. Lombardo, and T. Kading*: The behavior of squall lines in horizontally heterogeneous coastal environments. *Journal of the Atmospheric Sciences*, **75**, 1243 – 1269. DOI: 10.1175/JAS-D-17-0248.1

2017

Milrad, S, **K. Lombardo**, E. H. Atallah, and J. R. Gyakum: Numerical simulations of the 2013 Alberta Flood: Dynamics, thermodynamics, and the role of orography. *Monthly Weather Review*, **145**, 3049 – 3072. DOI: 10.1175/MWR-D-16-0336.1

Kumjian, M. R., and **K. Lombardo:** Insights into the evolving microphysical and kinematic structure of northeastern U.S. winter storms from dual-polarization Doppler radar. *Monthly Weather Review*, **145**, 1033 – 1061. DOI: 10.1175/MWR-D-15-0451.1

Flynn, K. R., M. R. Fewings, C. Gotschalk, and **K. Lombardo:** Large-scale anomalies in sea-surface temperature and air-sea fluxes during wind relaxation events off the United States west coast in summer. *Journal of Geophysical Research – Oceans*, **122**. DOI: 10.1002/2016JC012613

2016

Fewings, M. R., L. Washburn, C. E. Dorman, C. Gotschalk, and **K. Lombardo:** Synoptic forcing of wind relaxations of Pt. Conception, California. *Journal of Geophysical Research – Oceans*, **121**. 5711-5730. DOI: 10.1002/2016JC011699

Lombardo, K., E. Sinsky*, Y. Jia, M. M. Whitney, and J. Edson: Sensitivity of simulated sea breezes to initial conditions in complex coastal region. *Monthly Weather Review*, **144**, 1299 – 1320. DOI: 10.1175/MWR-D-15-0306.1

2015

Milrad, S., **K. Lombardo**, J. Gyakum, and E. Atallah: Corrigendum: On the dynamics, thermodynamics, and forecast model evaluation of two snow burst events in southern Alberta. *Weather and Forecasting*, **30**, 1404 – 1404. DOI: 10.1175/WAF-D-15-0106.1

Lombardo, K., B. A. Colle, Z. Zhang: Evaluation of Historical and Future Precipitation over the Eastern U.S. and Western Atlantic Storm Track using CMIP5 Models. *Journal of Climate*, **28**, 451 – 467. DOI: 10.1175/JCLI-D-14-00343.1

2014

Milrad, S., J. Gyakum, **K. Lombardo**, and E. Atallah: On the dynamics, thermodynamics, and forecast model evaluation of two snow burst events in southern Alberta. *Weather and Forecasting*, **29**, 725 – 749. DOI: 10.1175/WAF-D-13-00099.1

Maloney, E., S. Camargo, E. Chang, B. Colle, R. Fu, K. Geil, Q. Hu, X. Jiang, N. Johnson, K. Karauskas, J. Kinter, B. Kirtman, S. Kumar, B. Langenbrunner, **K. Lombardo**, L. Long, A. Mariotti, J. Meyerson, K. Mo, J. D. Neelin, Z. Pan, R. Seager, Y. Serra, J. Sheffield, J. Stroeve, J. Thibeault, S.-P. Xie, C. Wang, B. Wyman, M. Zhao: North American Climate in CMIP5 Experiments. Part III: Assessment of twenty-first-century projections. *Journal of Climate*, **27**, 2230 – 2270. DOI: 10.1175/JCLI-D-13-00273.1

2013

Sheffield, J., A. Barrett, B. Colle, D. N. Fernando, R. Fu, K. L. Geil, Q. Hu, J. Kinter, S. Kumar, B. Langenbrunner, **K. Lombardo**, L. N. Long, E. Maloney, A. Mariotti, J. E. Meyerson, K. C. Mo, D. Neelin, S. Nigam, Z. Pan, T. Ren, A. Ruiz-Barradas, Y. L. Serra, A. Seth, J. M. Thibeault, J. C. Stroeve, Z. Yang, L. Yin: North American Climate in CMIP5 Experiments. Part I: Evaluation of Historical Simulations of Continental and Regional Climatology. *Journal of Climate*, **26**, 9209 – 9245. DOI: 10.1175/JCLI-D-12-00592.1

Lombardo, K., and B. A. Colle: Processes controlling the structure and longevity of two quasi-linear convective systems crossing the southern New England coast. *Monthly Weather Review*, **141**, 3710–3734. DOI:10.1175/MWR-D-12-00336.1

Colle, B., Z. Zhang, **K. Lombardo**, E. Chang, P. Liu, M. Zhang: Historical and future predictions of eastern North America and western Atlantic extratropical cyclones in CMIP5 during the cool season. *Journal of Climate*, **27**, 6682 – 6903. DOI: 10.1175/JCLI-D-12-00498.1

2012

Lombardo, K., and B. A. Colle: Ambient conditions associated with the maintenance and decay of quasi-linear convective systems crossing the northeastern U.S. coast. *Monthly Weather Review*, **140**, 3805 – 3819. DOI: 10.1175/MWR-D-12-00050.1

Colle, B. A., **K. Lombardo**, J. S. Tongue, W. Goodman, N. Vaz: Tornadoes in the New York metropolitan region: Climatology and multiscale analysis of two events. *Weather and Forecasting*, **27**, 1326 – 1348. DOI: 10.1175/WAF-D-12-00006.1

2011

Lombardo, K., and B. A. Colle: Convective storm structures and ambient conditions associated with severe weather over the Northeast U.S. *Weather and Forecasting*, **26**, 940 – 956. DOI: 10.1175/WAF-D-11-00002.1

2010

Lombardo, K., and B. A. Colle: The spatial and temporal distribution of organized convective structures over the Northeast and their ambient conditions. *Monthly Weather Review*, **138**, 4456 – 4474. DOI: 10.1175/2010MWR3463.1

2007

Molinari, J., **Lombardo, K.**, Vollaro, D.: Tropical cyclogenesis within an equatorial Rossby wave packet. *Journal of the Atmospheric Sciences*, **64**, 1301 – 1317. DOI: 10.1175/JAS3902.1

WHITE PAPERS

Connecticut Physical Climate Science Assessment Report (PSCAR), 2018: A. Seth, G. Wang, C. Kirchhoff, **K. Lombardo**, A. Richard, S. Stephenson.

ADDITIONAL ARTICLES

Gentemann, C. L., C. A. Clayson, T. Lee, S. Brown, A. Subramanian, M. Bourassa, **K. Lombardo**, R. Parfitt, H. Seo, S. Gille, T. Farrar, B. Argrow, J. Whitaker, D. Kliest, J. May, P. Browne, C. Harris, M. Kachi, H. Tomita, A. Bentamy, 2021: Butterfly: a satellite mission to reveal the oceans' impact on our weather and climate. Zenodo. DOI: 10.5281/zenodo.5120586

PROFESSIONAL SERVICE

Editorship

- Associate Editor, *Weather and Forecasting*, 1/16 – present
- Guest Editor, Special Issue, *Atmosphere: Thunderstorm Morphological Evolution and Forecasts of Thunderstorm System Rainfall*, 8/19 – 5/21

NCAR

- Invited Member of the Computational and Information Systems Laboratory (CISL) High Performance Computing (HPC) Allocation Panel (CHAP), National Center for Atmospheric Research (NCAR): Term 4/18 – present; Reviewer for Community Earth System Model (CESM) large allocation request, Atmospheric Model Working Group: 10/18, 10/19, 10/20

UCAR

- Elected Member of the University Corporation for Atmospheric Research (UCAR) Membership Committee: Term 10/19 – 10/22
- Elected Member of the President's Advisory Committee on University Relations (PACUR), University Corporation for Atmospheric Research (UCAR): Term 10/17 – 7/19
- University Corporation for Atmospheric Research (UCAR) Member Representative, 2018

AMS

- Member of American Meteorological Society Planning Commission Task Force on Leadership Development, 11/19 – 2/21

- Member of the Scientific and Technological Activities Commission (STAC), Committee on Severe Local Storms, Term 1/19 – 1/22; Special Symposium Sub-Committee for the 2020 AMS Annual Meeting; Conference Sub-Committee for the 2020 AMS Annual Meeting
- Member of the Scientific and Technological Activities Commission (STAC), American Meteorological Society (AMS) Committee on Coastal Environment, Term 1/21 – present

NOAA

- Invited participant in the Spring Forecasting Experiment (SFE), part of the Experimental Forecast Program (EFP) of the NOAA Hazardous Weather Testbed (HWT) hosted by the Storm Prediction Center (SPC) and the National Severe Storms Laboratory (NSSL): 5/08, 5/17, 5/21, 5/22

NASA

- Proposal review panel member, 2020

CIWRO

- Member of the Peter Lamb Postdoctoral Fellowship Committee, 11/21-3/22

Invited Panelist

- *“Negotiation: Maximizing Your Worth.”* 12 January 2020, Eighth Early Career Professional Conference, One-hundredth American Meteorological Society Annual Meeting, Boston, MA
- *“Education in Atmospheric Science: How to Train a Scientist We all Want to Work with.”* 1 October 2019, Nineteenth Cyclone Workshop, Seeon, Germany

CONFERENCE COMMITTEE SERVICE

Conference Programs Committee

- 21st Symposium on the Coastal Environment, American Meteorological Society Annual Meeting 8 – 12 January 2022, Denver, CO
- 20th Symposium on the Coastal Environment, One-hundredth American Meteorological Society Annual Meeting 23 – 27 January 2022, Houston, TX
- Team Leader: Twenty-ninth Conference on Severe Local Storms, American Meteorological Society, 1/18 – 11/18
- Member: Twenty-eighth Conference on Severe Local Storms, American Meteorological Society, 1/16 – 11/16
- Member: Twenty-seventh Conference on Severe Local Storms, American Meteorological Society, 3/14 – 11/14

Conference/Workshop Organizer

- Workshop Organizer: Marine Sciences – Geosciences Joint Climate Modeling Workshop, 2/18 – 5/18
- Workshop Co-organizer: UConn Climate Research Symposium, Geoscience and Marine Sciences, 2/19 – 5/19

Conference Session Chair

- 20th Symposium on the Coastal Environment, One-hundredth American Meteorological Society Annual Meeting 23 – 27 January 2022, Houston, TX

- Severe Local Storms Symposium, One-hundredth American Meteorological Society Annual Meeting 12 – 16 January 2020, Boston, MA
- Twenty-ninth Conference on Severe Local Storms, American Meteorological Society. 22 – 26 October 2018, Stowe, VT
- Eighteenth Cyclone Workshop. 1 – 6 October 2017, Sainte Adele, Quebec, Canada
- Twenty-eighth Conference on Severe Local Storms, American Meteorological Society. 7 – 11 November 2016, Portland, OR
- Eighth Conference on Severe Storms – European Conferences on Severe Storms, European Severe Storms Laboratory, 14 – 18 September 2015, Wiener Neustadt, Austria
- Twenty-seventh Conference on Severe Local Storms, American Meteorological Society, 3 – 7 November 2014, Madison, WI
- Twenty-sixth Conference on Severe Local Storms, American Meteorological Society, 4 – 8 November 2012, Nashville, TN

Conference Event Organizer

- Early Career Networking Event Committee, Member. Twenty-eighth Conference on Severe Local Storms, American Meteorological Society, 8/16 – 11/16

Conference Presentation Judge

- [Student presentations]: Twenty-ninth Conference on Severe Local Storms, American Meteorological Society. 22 – 26 October 2018, Stowe, VT
- [All conference presentations]: Ninth European Conference on Severe Storms, 18 – 22 September 2017, Pula, Croatia
- [Student presentations]: American Geophysical Union Fall Meeting, American Geophysical Union, 12 – 16 December 2016, San Francisco, CA
- [Student presentations]: Twenty-eighth Conference on Severe Local Storms, American Meteorological Society. 7 – 11 November 2016, Portland, OR

UNIVERSITY SERVICE

PSU

College of Earth and Mineral Sciences, ALLWE Implementation Committee 1/20 – present

College of Earth and Mineral Sciences, Strategic Planning Committee Member, Driving Digital Innovation thematic group, 8/19 – 3/20

Computer Committee, 12/19 – present

Graduate Academic Program Committee, 9/19 – present

UConn

Admissions Committee, 3/15 – 8/16

Atmospheric Sciences Group, Executive Member, 1/14 – 7/19

Awards Committee, 3/15 – 7/19

Contributed to Departmental Graduate Exam, 1/17 – 7/19

Faculty Search Committee for department tenure-track hire, 10/18 – 7/19

SET+ Committee to formulate a new plan for teaching evaluations, 1/19– 7/19

Space and Equipment Committee, 1/16 – 8/16

Undergraduate Programs Committee, 8/14 – 7/19

DIVERSITY TRAINING

Bystander Intervention Training, 26 September 2019, College of Earth and Mineral Sciences, The Pennsylvania State University

Safer People Safer Places Foundations Workshop, 28 January 2020, Center for Sexual and Gender Diversity, The Pennsylvania State University

Transgender and Gender Inclusion Workshop, 18 February 2020, Center for Sexual and Gender Diversity, The Pennsylvania State University

OUTREACH

Community Group Presentations

- Greenwich High School Professional Development Workshop, Greenwich High School: 11/17
- NOAA Climate Stewards and Connecticut Sea Grant Educator Professional Development Workshop, University of Connecticut: 7/17
- Early College Experience (ECE) Workshop, University of Connecticut: 10/14, 3/15

Media Interviews

- *Weather World*. Aired 8/19/21
- *Weather World*. Published 2/18/20
- *The Guardian*. The ‘bomb cyclone’ heading for the eastern US – is that even a thing? Published 1/18
- *WABC-TV New York News*. Climate Chaos: Anatomy of a Tornado. Aired 4/13

Additional Outreach

- World Science Festival, exhibit volunteer, Brooklyn, NY, 6/12
- Sailing Company (not-for-profit, request from UConn undergraduate student). Forecast of the prevailing winds and currents 7/15/16 – 8/15/16.
- Written contribution to the School of Marine and Atmospheric Sciences, Stony Brook University Alumni Profiles, February 2015. [invited]
- Written contribution for an exhibition image (Mantle of Winter: Guy Wiggins) at the William Benton Museum of Art, School of Fine Arts, University of Connecticut, October 2014. [invited]

PRESENTATIONS

SEMINARS: INVITED

2022

School of Marine and Atmospheric Sciences (SoMAS), Stony Brook University, Topics in Atmospheric and Oceanic Sciences (TAOS) Seminar Series. “The Behavior of Squall Lines over Coastal Zones”. 5 October 2022.

Earth System Science Interdisciplinary Center (ESSIC) of the University of Maryland (UMD) Webinar Series. “Mesoscale Convective System Behavior over Coastal and Mountainous Regions”. 9 May 2022.

2021

Department of Atmospheric and Environmental Sciences (DAES) and the Atmospheric Science Research Center (ASRC) Joint Colloquium. “How Sea Breezes and Coastal Mountains Alter the Life Cycle of Squall Lines”. University at Albany, Albany, NY, 13 September 2021.

2019

Department of Earth and Atmospheric Sciences Colloquium. “Dynamics of Mesoscale Convective Systems over Varying Surface Topography”. University of Nebraska – Lincoln, Lincoln, NB, 25 October 2019.

Department of Earth and Atmospheric Sciences Seminar. “The Impact of Coastlines and Orography on Extreme-Rain-Producing Convective Storms”. Cornell University, Ithaca, NY, 13 March 2019.

Department of Atmospheric and Oceanic Sciences Seminar. “Forecasting Deep Convective Storms Traversing Heterogeneous Surfaces”. University of Colorado Boulder, Boulder, CO, 25 February 2019.

Department of Meteorology Colloquium. “The Dynamics of Deep Convective Storms Traversing Coastal Boundaries and Complex Terrain”. The Pennsylvania State University, State College, PA, 13 February 2019.

2018

Atmospheric Science Seminar Series. “Deep Convective Storms over Heterogeneous Coastal Regions”. University of Wyoming, Laramie, WY, 11 October 2018.

Natural Resources and the Environment Seminar Series. “Coastal Severe Thunderstorms”. University of Connecticut, Storrs, CT, 28 September 2018.

Department of Estuarine and Ocean Sciences Seminar Series. “Coastal Convective Storm Dynamics”. University of Massachusetts Dartmouth, New Bedford, MA, 26 September 2018

Department of Physical Oceanography Seminar. “The Behavior of Coastal Squall Lines”. Woods Hole Oceanographic Institution, Woods Hole, MA, 29 May 2018.

Department of Atmospheric Science Colloquium. “The Behavior of Coastal Squall Lines”. Colorado State University, Fort Collins, CO, 27 April 2018.

Department of Marine Sciences Seminar Series. “The Behavior of Coastal Squall Lines”. University of Connecticut, Avery Point, CT, 20 April 2018. – Pre-tenure seminar.

2017

NOAA Climate Stewards and Connecticut Sea Grant Educator Professional Development Workshop. “Weather in Our Changing Climate”. University of Connecticut, Avery Point, CT, 11 July 2017. **Keynote Speaker*

Department of Physics Colloquium. “Severe Convective Storms over Coastal Regions”. University of Connecticut, Storrs, CT, 14 April 2017.

Graduate School of Oceanography Colloquium. “Severe Convective Storms over Coastal Regions”. University of Rhode Island, Kingstown, RI, 24 March 2017.

2015

Department of Meteorology Colloquium. “Evolving Quasi-linear Convective Storms Crossing over Coastlines”. Pennsylvania State University, University Park, PA, 2 December 2015.

Fourteenth Annual Seminar Series sponsored by the Werth Center for Coastal and Marine Studies at Southern Connecticut State University. “Winter Coastal Storms in a Changing Climate”. Southern Connecticut State University, New Haven, CT, 1 April 2015.

2014

Annual Science Immersion Workshop for Journalists. “Precipitation Extremes in a Changing Climate”. University of Rhode Island Graduate School of Oceanography, Narragansett, RI, 2 June 2014.

2013

Brookhaven National Laboratory: Identifying and Predicting Weather Impacts on Utility Systems Workshop. “Identifying and predicting organized severe storms over the northeastern U.S. coastal region”. Upton, NY, 3 December 2013.

Lamont-Doherty Earth Observatory, Columbia University Seminar Series. “The impact of the Atlantic coastal environment on evolving quasi-linear convective systems”. New York NY, 18 January 2013.

CONFERENCE PRESENTATIONS: INVITED

2019

Lombardo, K., M. Blanusa, M. Wilson: Coastal severe thunderstorms in a future climate. American Geophysical Union Fall Meeting, 9 – 13 December 2019, San Francisco, CA. American Geophysical Union.

2015

Lombardo, K.: The interaction between QLCs and marine atmospheric boundary layers: A process study. Eighth European Conferences on Severe Storms, 14 – 18 September 2015, Wiener Neustadt, Austria. European Severe Storms Laboratory.

CONFERENCE AND WORKSHOP PRESENTATIONS AND POSTERS: CONTRIBUTED

2022 presentations

Kumjian, M. R., R. S. Schrom, I. M. Giammanco, J. Soderholm, K. Lombardo, and Y. Lin: Two paradigms for radar-based hail detection and sizing: Problems and Possibilities. 2nd North American Hail Workshop, 20 – 22 September 2022, Boulder, CO.

Lombardo K., and M. R. Kumjian: Observations of the discrete propagation of a mesoscale convective system during RELAMPAGO-CACTI. Nineteenth Conference on Mesoscale Processes/One-hundredth-and-second American Meteorological Society Annual Meeting, 23 – 27 January 2022, Houston, Texas.

Kumjian, M. R., K. Lombardo, K. Schneider, M. Oue, and P. Kollias: The anatomy and physics of a snowsquall., Nineteenth Conference on Mesoscale Processes/One-hundredth-and-second American Meteorological Society Annual Meeting, 23 – 27 January 2022, Houston, Texas.

Kumjian, M. R., K. Lombardo, Y. Lin, and A. Van Alstine: Using state-of-the-art hailstorm simulations to inform new polarimetric doppler radar hail sizing algorithms. PROM All-hands Meeting, February 2022, Bonn, Germany.

2022 posters

Kumjian, M. R., J. Soderholm, I. Giammanco, K. Lombardo, Y. Lin, and Z. Lebo: Revisiting thermal energy transfer coefficients for nonspherical hailstones. 2nd North American Hail Workshop, 20 – 22 September 2022, Boulder, CO.

Lombardo, K., and M. R. Kumjian: The role of the Argentine Mountains on the discrete propagation of a mesoscale convective system. Eleventh European Conference on Radar Meteorology and Hydrology, 29 August – 2 September, Locarno, Switzerland.

Clayson, C. A., K. Lombardo, and co-authors: Butterfly: A Satellite Mission to Transform Our Understanding of the Contribution of Air–Sea Fluxes to Weather and Climate. American Geophysical Union Fall Meeting, 12 – 16 December 2022, Chicago, IL, American Geophysical Union.

Kollias, P. K. Lombardo, and co-authors: Experiment of Sea Breeze Convection, Aerosols, Precipitation and Environment (ESCAPE). American Geophysical Union Fall Meeting, 12 – 16 December 2022, Chicago, IL, American Geophysical Union.

2021 presentations

Lombardo, K., F. Wu, and T. Kading: Coastal Thunderstorms. 6 December 2021, Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO) Workshop on Mesoscale and Stormscale Meteorology.

Kumjian, M. R., K. Lombardo, and Y. Lin: Hailstorm modeling. 6 December 2021, Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO) Workshop on Mesoscale and Stormscale Meteorology.

Kumjian, M. R., K. Lombardo, Y. Lin, and S. Loeffler: Environmental and storm structural influences on hail size inferred from hailstone growth trajectory model calculations. 2021, Third European Workshop on Hail, Karlsruhe, Germany.

Kumjian, M. R., K. Lombardo, Y. Lin, and S. Loeffler: Variability of hail production in simulated supercell storms. 2021, Fourteenth International Conference on MCS and High-Impact Weather, Nanjing, China.

2021 posters

Wu, F., and K. Lombardo: Precipitation enhancements in squall lines moving over mountainous coastal regions. 23– 27 January 2022, Nineteenth Conference on Mesoscale Processes/One-hundredth-and-second American Meteorological Society Annual Meeting, Houston, Texas.

2020 presentations

Lombardo, K., and F. Wu: Quasi-linear convective systems over topographically complex coastal regions. One-hundredth American Meteorological Society Annual Meeting, 12– 16 January 2020, Boston, Massachusetts.

2019 presentations

Lombardo, K., and F. Wu: The impact of coastal topography on mesoscale convective systems. Tenth European Conference on Severe Storms, 4 – 8 November 2019, Krakow, Poland.

Lombardo, K., and F. Wu: Dynamics of mesoscale convective systems over varying surface topography. Nineteenth Cyclone Workshop, 29 September – 4 October 2019, Seon, Germany.

Lombardo, K., and M. R. Kumjian: Radar observations of the discrete propagation of a mesoscale convective system during RELAMPAGO-CACTI. Thirty-ninth International Conference on Radar Meteorology, 16 – 20 September 2019, Nara Japan.

2019 posters

Baumann, Z., M. Blanus, R. Mason, K. Lombardo, and C. Koerting: Methylmercury cycling at the Surface of the Sea: Interaction of Rain and Seawater. Gordon Research Conference, Chemical Oceanography, 14-19 July 2019, Holderness, NH.

2018 presentations

Lombardo, K., and R. Hastings: Coastal Mid-Atlantic Squall Line Behavior: Twenty-ninth Conference on Severe Local Storms, 22 – 26 October 2018, Stowe, VT, American Meteorological Society.

Lombardo, K., and R. Hastings: Mid-latitude Squall Lines Interacting with Offshore Stable Boundary Layers. Twenty-ninth Conference on Weather Analysis and Forecasting/Twenty-fifth Conference on Numerical Weather Prediction, 4 – 8 June 2018, Denver, CO, American Meteorological Society.

Lombardo, K.: The impact of Maritime Continent islands on mesoscale convective systems during PISTON. Sixth Symposium on the Madden-Julian Oscillation and Sub-Seasonal Monsoon Variability. 7 –11 January 2018, Austin, TX, American Meteorological Society.

2017 presentations

Lombardo, K., and T. Kading: The behavior and characteristics of squall lines within coastal environments. Eighteenth Cyclone Workshop. 1 – 6 October 2017, Sainte Adele, Quebec, Canada.

Lombardo, K., and T. Kading: The behavior and characteristics of squall lines within coastal environments. Ninth European Conference on Severe Storms, 18 – 22 September 2017, Pula, Croatia.

Lombardo, K., E. Sinsky, J. Edson, and M. M. Whitney: Impact of high resolution sea surface temperature on simulated sea breezes. Twenty-eighth Conference on Weather Analysis and Forecasting/Twenty-fourth Conference on Numerical Weather Prediction, 22 – 26 January, Seattle WA, American Meteorological Society.

2016 presentations

Lombardo, K., and T. Kading: Coastal crossing of Mid-Atlantic Mesoscale Convective Systems: Twenty-eighth Conference on Severe Local Storms, 7 – 11 November 2016, Portland, OR, American Meteorological Society.

Pucillo, A., M. M. Miglietta, K. Lombardo, A. Manzato, and E. Gascòn: A multianalysis study of a bow echo-like storm in northeastern Italy: Sixteenth European Meteorological Society Annual Meeting and Eleventh European Conference on Applied Climatology, 12 – 16 September, Trieste Italy.

Lombardo, K.: Modification of Mesoscale Convective Systems Traversing the Maritime Continent: PISTON Workshop, 6 – 7 July, Arlington VA.

Milrad, S. M., K. Lombardo, E. H. Atallah, and J. R. Gyakum: Quantifying the role of orography in the 2013 Alberta Flood: Seventeenth Conference on Mountain Meteorology, 27 June – 1 July, Burlington VT, American Meteorological Society.

Colle, B., K. Lombardo, and H. Li: Challenges in severe convective storm prediction for the coastal-urban New York City-Long Island region on all time scales: Second Workshop on Severe Convection and Climate, Columbia University, 9 – 10 March, New York NY.

Colle, B., K. Lombardo, S. Ganetis, M. Sienkiewicz, M. Colbert, and B. Zavadoff: Investigation of convective storms over Long Island during the Doppler Radar for Education and Mesoscale Studies (DREAMS) project: Second Workshop on Severe Convection and Climate, Columbia University, 9 – 10 March, New York NY.

2016 posters

Lombardo, K., and T. Kading: Vertical transport by coastal Mesoscale Convective Systems: American Geophysical Union Fall Meeting, 12 –16 December 2016, San Francisco CA, American Geophysical Union.

Kading, T., and K. Lombardo: Simulated interaction of an idealized squall line with a cool marine atmospheric boundary layer: Twenty-eighth Conference on Severe Local Storms, 7–11 November 2016, Portland, OR, American Meteorological Society.

Lombardo, K., E. Sinsky, J. B. Edson, and M. Whitney: Impact of SST resolution on numerical sea breezes over complex coastal regions: Twenty-first Satellite Meteorology, Oceanography, and Climatology Conference/Twentieth Conference on Air-Sea Interaction, 15 – 19 August, Madison WI, American Meteorological Society.

Lombardo, K.: The impact of sea surface temperature on organized convective storms crossing over coastlines: Ocean Sciences Meeting, 21 – 26 February, New Orleans LA, Association for the Sciences of Limnology and Oceanography, American Geophysical Union, The Oceanography Society.

Sinsky, E., K. Lombardo, J. B. Edson, and M. M. Whitney: The impact of horizontal sea surface temperature gradients on Long Island Sound sea breezes: Ocean Sciences Meeting, 21 – 26 February, New Orleans LA, Association for the Sciences of Limnology and Oceanography, American Geophysical Union, The Oceanography Society.

2015 presentations

Lombardo, K.: Idealized quasi-linear convective storms crossing over coastlines: Seventeenth Cyclone Workshop, 25 – 30 October, Pacific Grove CA.

Lombardo, K.: The interaction between QLCs and marine atmospheric boundary layers: A process study: Twenty-seventh Conference on Weather Analysis and Forecasting/Twenty-third Conference on Numerical Weather Prediction, 29 June – 3 July, Chicago IL, American Meteorological Society.

Lombardo, K., E. Sinsky, Y. Jia, M. Whitney, and J. B. Edson: Sensitivity of simulated sea breezes to initial conditions: Twenty-seventh Conference on Weather Analysis and Forecasting/Twenty-third Conference on Numerical Weather Prediction, 29 June – 3 July, Chicago IL, American Meteorological Society.

Rosenberg, A., J. B. Edson, and K. Lombardo: Numerical improvements in the exchange of heat and momentum at the atmosphere-ocean interface. Nineteenth Conference on Air-Sea Interaction, 3 – 8 January, Phoenix, AZ, American Meteorological Society.

2015 posters

Lombardo, K.: Idealized quasi-linear convective storms crossing over coastlines: American Geophysical Union Fall Meeting, 14 – 18 December, San Francisco CA, American Geophysical Union.

2014 presentations

Lombardo, K., B. A. Colle, and Z. Zhang: Future variations in cool season precipitation along the U.S. east coast. Sixteenth Cyclone Workshop, Twenty-sixth Conference on Climate Variability and Change, 2 – 6 February, Atlanta, GA, American Meteorological Society.

2014 posters

Lombardo, K.: The interaction between QLCs and marine atmospheric boundary layers: A process study, Twenty-seventh Conference on Severe Local Storms, 3 – 7 November, Madison, WI, American Meteorological Society.

Colbert, M., J. Quickle, B. Zavadoff, B. A. Colle, and K. Lombardo: Towards a better understanding of convective storm evolution over the coastal northeastern U.S., Fifth Tri-State Weather Conference, 18 October, Danbury, CT, Western Connecticut State University, National Weather Service.

Colbert, M., J. Quickle, B. A. Colle, and K. Lombardo: Towards a better understanding of convective storm evolution over the coastal northeastern U.S., Thirty-ninth Northeastern Storm Conference, 7 – 9 March, Rutland, VT, American Meteorological Society, National Weather Association.

Lombardo, K., B. A. Colle, and Z. Zhang: Future variations in cool season precipitation associated with coastal cyclones over the western Atlantic storm track, Ocean Sciences Meeting, 23 – 28 February, Honolulu, HI, Association for the Sciences of Limnology and Oceanography, American Geophysical Union, The Oceanography Society.

Lombardo, K., B. A. Colle, M. Colbert: Towards a better understanding of convective storm evolution over the coastal northeastern U.S., Special Symposium on Severe Local Storms: The Current State of the Science and Understanding Impacts, 2 – 6 February, Atlanta, GA, American Meteorological Society.

Lombardo, K.: High-resolution numerical modeling of mesoscale coastal storms, Atmospheric Sciences Group Open Meeting, 16 January, University of Connecticut, Storrs, CT.

2013 presentations

Lombardo, K., B. A. Colle, and Z. Zhang: Future Variations in Cool Season Precipitation along the U.S. east coast. Sixteenth Cyclone Workshop, 22 – 27 September, Sainte-Adele, Quebec, Canada.

2012 presentations

Lombardo, K., and B. A. Colle: Two contrasting evolutions of quasi-linear convective systems encountering the northeastern U.S. coastal marine environment. Twenty-sixth Conference on Severe Local Storms, 5 – 8 November, Nashville, TN, American Meteorological Society.

2011 presentations

Lombardo, K., and B. A. Colle: The evolution of quasi-linear convective storms encountering the northeastern US coastal marine environment. Thirteenth Northeast Regional Operational Workshop, 2 – 3 November, Albany, NY, National Weather Service/American Meteorological Society.

Lombardo, K., and B. A. Colle: The evolution of quasi-linear convective systems encountering the northeastern US coastal marine environment. Fourteenth Conference on Mesoscale Processes, 1 – 4 August, Los Angeles, CA, American Meteorological Society.

Lombardo, K., and B. A. Colle: Relationship between organized convective structures and severe weather type over the northeast US Twenty-fourth Conference on Weather and Forecasting/Twentieth Conference on Numerical Weather Prediction, 23 – 27 January, Seattle, WA, American Meteorological Society.

2010 presentations

Lombardo, K., and B. A. Colle: A comparison of the ambient conditions favoring different organizational convective structures over the northeast U.S. Twenty-fifth Conference on Severe Local Storms, 11 – 14 October, Denver, CO, American Meteorological Society.

2009 presentations

Lombardo, K., and B. A. Colle: A climatology of convective systems over the Northeast U.S. and their structural evolution from the lee of the Appalachians to the Atlantic Coast. Thirteenth Conference on Mesoscale Processes, 17 – 20 August, Salt Lake City, UT, American Meteorological Society.

2008 presentations

Lombardo, K., and B. A. Colle: A climatology of convective system morphology over the Northeast United States. Tenth Northeast Regional Operational Workshop, 5 – 6 November, Albany, NY, National Weather Service/ American Meteorological Society.

Lombardo, K., and B. A. Colle: A climatology of convective system morphology over the Northeast United States. Twenty-fourth Conference on Severe Local Storms, 27 – 31 October 2008, Savannah, GA, American Meteorological Society.

Colle, B. A., K. Lombardo, J. S. Tongue, W. Goodman, and N. Vaz: Tornadic convection in the New York City Metropolitan Region: The 8 August 2007 event and a composite analysis. Twenty-fourth Conference on Severe Local Storms, 27 – 31 October 2008, Savannah, GA, American Meteorological Society.

2007 presentations

Lombardo, K., and B. A. Colle: Synoptic and mesoscale overview of three severe convective events over Long Island in 2007. Ninth Northeast Regional Operational Workshop, 7 – 8 November, Albany, NY, National Weather Service/ American Meteorological Society.

Lombardo, K., B. A. Colle, and J. Murray: Convective initiation and evolution approaching the southern New England coast and Long Island. Twelfth Conference on Mesoscale Processes, 6 – 9 August, Waterville Valley, NH, American Meteorological Society.

2004 presentations

Lombardo, K., and J. Molinari: Influence of equatorial Rossby waves on tropical cyclogenesis in the western Pacific. Twenty-sixth Conference on Hurricanes and Tropical Meteorology, 2 – 7 May, Miami Beach, FL, American Meteorological Society.

2003 presentations

Lombardo, K., and J. Molinari: Monsoon Trough variations in the western Pacific. First Northeast Tropical Cyclone Workshop, 2 – 3 June, Rhinebeck, NY.

2002 presentations

Lombardo, K., and J. Molinari: Development and breakdown of reverse monsoon troughs in the western Pacific. Twenty-fifth Conference on Hurricanes and Tropical Meteorology, 29 April – 3 May, San Diego, CA, American Meteorological Society.

2000 presentations

Lombardo, K., E. Atallah, and D. Keyser: Planetary- and synoptic-scale environments of strong tornadic events over the northeastern United States. Second Northeast Regional Operational Workshop, 7 – 8 November, Albany, NY, National Weather Service/ American Meteorological Society.