DAVID VOLLARO

Phone: (518) 496-9166
djv4@verizon.net

12 Jefferson Rd
Glenmont, NY 12077

EDUCATION

MS University at Albany, Atmospheric Science May 1988
Thesis: "A large-scale analysis of the evolution of the outflow level winds in an intensifying tropical cyclone"

BS University at Albany, Atmospheric Science May 1985
Graduated magna cum laude

EXPERIENCE

Senior Scientific Programmer, 2000-present
Research Foundation of the State University of New York
Duties:

- Used programming skills to process and interpret meteorological observations and model analyses.
- Learned new computer languages and research methods to more efficiently manipulate various data sources.
- Carried out numerous scientific calculations, created figures, and assisted in the writing of research publications and grant proposals.
- Mentored graduate students to strengthen their programming proficiency and develop proper research habits.

Research Programmer, 1988-2000
Research Foundation of the State University of New York
Duties: Similar to above.

COMPUTER SKILLS

- Extensive experience working with big datasets in various formats including gridded and spectral fields from ECMWF and NOAA.
- Ability to manipulate and visualize satellite data, radar data, atmospheric surface and upper air observations.
- Knowledge of Python, Fortran, C-Shell, HTML, NCL, McIDAS, and GEMPAK programming languages
- Proficiency with Microsoft Office 2013 applications (Excel,Word,PowerPoint,Access).
- Platform experience: Linux, Windows, UNIX and Solaris.

PROFESSIONAL TRAINING

NSF XSEDE HPC Big Data Workshop
DAES Albany, NY August 6-7 2019
Introduction to big data analytics and machine learning

Unidata Regional Software Training Workshop
DAES Albany, NY May 29-30 2019
Introduction to python programming for the atmospheric sciences

NCAR Command Language Workshop
DAES Albany, NY May 21-24 2013
Introduction to NCL programming language

HONORS AND AWARDS

- NASA Group achievement award, Hurricane and Severe Storm Sentinel 2015
- NASA Group achievement award, Genesis and Rapid Intensification Processes 2011
- First enrollee into SUNY combined BS/MS program in Atmospheric Science 1984

PROFESSIONAL AFFILIATIONS

American Meteorological Society 1988-Present

PROFESSIONAL SERVICE

Reviewer for:

- Monthly Weather Review
- Journal of the Atmospheric Sciences

PRESENTATIONS AND INVITED LECTURES

Paper Presentations
Influences of vertical shear and upper level vorticity on tropical cyclone intensification. 20th Conference on Hurricanes and Tropical Meteorology. May 10-14 1993, San Antonio, Texas

Excitation of secondary eye walls by external interactions. 19th Conference on Hurricanes and Tropical Meteorology. May 6-10 1991, Miami Florida.

PUBLICATIONS

Coauthor on 28 publications in peer-reviewed journals.

COMMUNITY SERVICE

Regional Food Bank of Northeastern New York
Volunteer, Albany, 2016-2019

Bethlehem Soccer Club
Youth coach 2010-2016

Big Brothers Big Sisters of the Capital Region
Big brother volunteer, Albany, 1989-1991

PUBLICATIONS

Molinari, J., J. Zhang, R.F. Rogers, and D. Vollaro 2019:REPEATED EYEWALL REPLACEMENT CYCLES IN HURRICANE FRANCES (2004). *Monthly Weather Review*, **147**, 2009-2022.

Molinari, J., M. Rosenmayer, D. Vollaro, and S. Ditchek 2019:Turbulence Variations in the Upper Troposphere in Tropical Cyclones from NOAA G-IV Flight-Level Vertical Acceleration Data. *Journal of Applied Meteorology and Climatology*, **58**, 569-583.

Romps, D.M., A. Charn, R. Holzwith, W. Lawrence, J. Molinari, and D. Vollaro 2018: CAPE times P explains lightning over land but not the land-ocean contrast. *Geophysical Research Letters*, **45**, 12623-12630.

Molinari, J., and D. Vollaro 2017: Monsoon Gyres of the Northwest Pacific: Influences of ENSO, the MJO, and the PacificJapan Pattern. *Journal of Climate*, **30**, 1765-1777.

Ditchek, S., J. Molinari, and D. Vollaro 2017: Tropical Cyclone Outflow-Layer Structure and Balanced Response to Eddy Forcings. *Journal of the Atmospheric Sciences*, **74**, 133-149.

Romps, D.M., J.T. Seeley, D. Vollaro, and J. Molinari, 2014: Projected increase in lightning strikes in the United States due to global warming. *Science*, **346,** 851-854.

Molinari, J., and D. Vollaro, 2014: Symmetric instability in the outflow layer of a major hurricane. *Journal of the Atmospheric Sciences*, **71,** 3739-3746.

Molinari, J., P. Duran, and D. Vollaro, 2014: Low Richardson number in the tropical cyclone outflow layer. *Journal of the Atmospheric Sciences*, **71,** 3164-3179.

Crandall, B., J. Molinari, and D. Vollaro, 2013: Forecasting Challenges Associated with Tropical Cyclones Within Subtropical Gyres. *Weather and Forecasting*, **29**, 99-114.

Molinari, J., J. Frank, and D. Vollaro, 2013: Convective bursts, downdraft cooling, and boundary layer recovery in a sheared tropical storm. *Monthly Weather Review*, **141**, 1048-1060.

Molinari, J.,and D. Vollaro, 2013: What percentage of western north Pacific tropical cyclones form within the monsoon trough? *Monthly Weather Review*, **141**, 499-505.

Molinari, J., D.M. Romps, D. Vollaro, and L. Nguyen, 2012: CAPE in tropical cyclones. *Journal of the Atmospheric Sciences*, **69,** 2452-2463.

Molinari, J. and D. Vollaro, 2012: A subtropical cyclonic gyre associated with interactions of the MJO and the midlatitude jet.*Monthly Weather Review*, **140,** 343-357.

Molinari, J., and D. Vollaro, 2010: Rapid intensification of a sheared tropical storm. *Monthly Weather Review*, **138**, 3869-3885.

Molinari, J., and D. Vollaro, 2010: Distribution of helicity, CAPE, and shear in tropical cyclones. *Journal of the Atmospheric Sciences*, **67**, 274-284.

Molinari, J., and D. Vollaro, 2008: Extreme helicity and intense convective towers in Hurricane Bonnie. *Monthly Weather Review*, **136**, 4355-4372.

Molinari, J., K. Lombardo, and D. Vollaro, 2007: Tropical cyclogenesis within an equatorial Rossby wave packet. *Journal of the Atmospheric Sciences*, **64**, 1301-1317.

Molinari, J., P. Dodge, D. Vollaro, K.L. Corbosiero, and F. Marks, Jr., 2006: Mesoscale aspects of the downshear reformation of a tropical cyclone. *Journal of the Atmospheric Sciences*, **63**, 341-354.

Molinari, J., D. Vollaro, and K.L. Corbosiero, 2004: Tropical cyclone formation in a sheared environment: A case study. *Journal of the Atmospheric Sciences*, **61**, 2493-2509.

Molinari, J., and D. Vollaro, 2000: Planetary and synoptic scale influences on eastern Pacific tropical cyclogenesis. *Monthly Weather Review*, **128**, 3296-3307.

Molinari, J., D. Vollaro, S. Skubis, and M. Dickinson, 2000: Origins and mechanisms of eastern Pacific tropical cyclogenesis: A case study. *Monthly Weather Review*, **128**, 125-139.

Molinari, J., S. Skubis, D. Vollaro, F. Alsheimer, and H. Willoughby, 1998: Potential vorticity analysis of hurricane intensification. *J. Atmos. Sci.*, **55,** 2632-2644.

Molinari, J., D. Knight, M. Dickinson, D. Vollaro, and S. Skubis, 1997: Potential vorticity, easterly waves, and tropical cyclogenesis. *Monthly Weather Review*, **125,** 2699-2708.

Molinari, J., S. Skubis, and D. Vollaro, 1995: External influences on hurricane intensity: Part III. Potential vorticity structure. *J. Atmos. Sci.*, **52,** 3593-3606.

Molinari, J., D. Vollaro, and S. Skubis, 1993: Application of the Eliassen balanced model to real-data tropical cyclones. *Monthly Weather Review*, **121**, 2409-2419.

Molinari, J., D. Vollaro, and F. Robasky, 1992: Use of ECMWF operational analyses for studies of the tropical cyclone environment. *Meteorology and Atmospheric Physics*, **47**, 127-144.

Molinari, J., and D. Vollaro, 1990: External influences on hurricane intensity: Part II. Vertical structure and response of the hurricane vortex. *Journal of the Atmospheric Sciences*, **47**, 1902-1918.

Molinari, J., and D. Vollaro, 1989: External influences on hurricane intensity: Part I. Outflow layer eddy angular momentum fluxes. *Journal of the Atmospheric Sciences*, **46**, 1093-1105.

REFERENCES

Dr. John Molinari, Research Professor, Retired.
4216 Calgary Way
Louisville, KY 40241
Phone: 518-424-9985
518-669-8934
Email: jmolinari@albany.edu

Dr. Kristen Corbosiero, Associate Professor
Dept. of Atmospheric & Environmental Sciences
University at Albany
ES 321
1400 Washington Ave
Albany, NY 12222
Phone: 518-442-5852
Email: kcorbosiero@albany.edu

Kevin Tyle, M.S., Manager of Departmental Computing
Dept. of Atmospheric & Environmental Sciences
University at Albany
ES 228
1400 Washington Ave
Albany, NY 12222
Phone: 518-442-4578
Email: ktyle@albany.edu