

Michael Notaro

Nelson Institute Center for Climatic Research, University of Wisconsin-Madison
1225 West Dayton Street, Madison, Wisconsin 53706
Tel. No. (608) 261-1503, Email: mnotaro@wisc.edu

Education and Training

Ph.D in Atmospheric Science, State University of New York at Albany 1998-2002
M.S. in Atmospheric Science, State University of New York at Albany 1995-1998
B.S. in Atmospheric Science, State University of New York at Albany 1992-1995
Awards: Robert C. Byrd Undergraduate Scholarship, Golden Key National Honor Society, American Meteorological Society Graduate Travel Scholarship (1997)

Research and Professional Experience

Director, Center for Climatic Research, University of Wisconsin-Madison 2022-2023
Interim Director, Center for Climatic Research, University of Wisconsin-Madison 2010, 2022
Lecturer, Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison 2022-2023
Associate Director, Center for Climatic Research, University of Wisconsin-Madison 2011-2021
Senior Scientist, Center for Climatic Research, University of Wisconsin-Madison 2014-2023
Affiliate Faculty, Department of Atmospheric and Oceanic Sciences, Univ. Wisconsin-Madison 2018-2021
Associate Scientist, Center for Climatic Research, University of Wisconsin-Madison 2008-2014
Assistant Scientist, Center for Climatic Research, University of Wisconsin-Madison 2005-2008
Research Associate, Center for Climatic Research, University of Wisconsin-Madison 2002-2004
Research Assistant, Atmospheric Sciences Research Center, State University of New York-Albany 1995-2002
Teaching Assistant, Dep't of Earth & Atmospheric Sciences, State University of New York-Albany 1995, 1997

Areas of Expertise

Regional and global climate modeling; surface-atmosphere interactions and feedbacks; dynamic vegetation modeling; climate change and its impacts on terrestrial ecosystems; lake-effect snow; Great Lakes hydrology; Middle Eastern dust storms; weather extremes; climate science education.

Accomplishments and Synergistic Activities

92 scientific publications, 182 oral presentations, and 101 interviews and media releases.
Served as PI or co-PI on 39 grants, totaling \$8.2 million.
Granted permanent PI status for academic staff by the University of Wisconsin-Madison Office of the Vice Chancellor for Research and Graduate Education
Wisconsin trainer/partner for the Global Learning and Observations to Benefit the Environment (GLOBE) environmental education and youth citizen science program: led GLOBE workshops to train educators and staff at the Cunningham Intermediate School, Aldrich Intermediate School, Fruzen Intermediate School, Beloit Memorial High School, Beloit Learning Academy, McNeel Intermediate School, Southern Door County Middle and High Schools, Beloit College, Welty Environmental Center, Butternut School, Blessed Trinity School, Gibraltar Township School, and Ridges Sanctuary
Taught ATM 100 Weather and Climate during Summer 2022 and Summer 2023 for the UW-Madison Summer Collegiate Experience. Taught ATM 100 during Spring 2023 for the AOS department.
Developed and directed two STEM camps for autistic middle and high school students: The Sky's The Limit (Beloit) and Nature's Navigators (Wisconsin Dells)
Advised 1 MS student, 3 PhD students, 5 interns, 6 postdoctoral researchers, and 1 REU undergraduate.
Member of the Climate Working Group and the Working Group Council of the Wisconsin Initiative on Climate Change Impacts, CCR Science Council, and American Geophysical Union.
Member of the Advisory Board, Science Team, and PI Leadership Team for the Great Lakes Integrated Sciences and Assessment (GLISA)
Co-Director of the Midwest Global Learning and Observations to Benefit the Environment (GLOBE) / Earth System Science (ESS) Collaborative
Hosted the Midwest GLOBE Student Research Symposium at UW-Madison in April 2023
American Geophysical Union 2014 Editor's Citation for Excellence in Refereeing for the Journal of Geophysical

Research Atmospheres

Participated in Department of Energy review panels, 2015, 2017, 2018.
Participated in National Oceanic and Atmospheric Administration review panel, 2017.
Participated in National Aeronautics and Space Administration review panel, 2020.
Co-author on Department of Energy topical whitepaper, “Biogeochemical Processes and Feedbacks: A white paper for DOE’s Regional and Global Climate Modeling Program,” March 2017.
Frequent reviewer of publications (Climate Dynamics, Earth Interactions, Ecological Modelling, Geophysical Research Letters, Global Change Biology, International Journal of Climatology, International Journal of Geophysics, Journal of Climate, Journal of Geophysical Research, Journal of Hydrometeorology, International Journal of Limnology, Monthly Weather Review, Nature, Quarterly Journal of the Royal Meteorological Society) and proposals (Department of Energy, National Science Foundation, United States Department of Agriculture)
Co-developer of Reid Bryson Scholarship for (under)graduates, promoted scholarship to donors, and judged contestants.
Organizer of the televised (Wisconsin Public Television), nine-part seminar series in 2009, “Bracing for Impact: Climate Change Adaptation in Wisconsin”.
Consultant for climate change spread in National Geographic Visual Atlas of the World.
Sunday School Teacher at Westwood Christian Church, WI and Parkside Community Church, NY for 15 years

Active and Closed Grants (as PI or Co-PI) (39 grants, total: \$8,159,727)

United States Department of Agriculture, “Rural Partnerships Institute,” co-PI: Michael Notaro, 2023-2026, CCR budget: \$1,320,912.
United States Coastal Research Program, “Development of a probabilistic compound flood hazard assessment tool and evaluation of countermeasures for Great Lakes cities,” UW PI: Michael Notaro, 2023-2026, UW budget: \$179,999
Wisconsin Idea Collaborative Grant, “Nature’s Navigators Camp: Supporting Neurodiverse Learners in Effective STEM Education,” PI: Michael Notaro, 2023-2024, \$41,626.
National Oceanic and Atmospheric Administration (NOAA) Great Lakes Integrated Sciences and Assessment (GLISA), “Great Lakes Integrated Sciences and Assessment,” co-PI: Michael Notaro, 2021-2026, UW budget \$276,784.
Wisconsin Sea Grant, “Snow-GLOBE Youth Citizen Science Collaborative,” PI: Michael Notaro, 2022-2024, \$49,902.
National Science Foundation (NSF), “GP:IN Fostering STEM education and career opportunities in a diverse Wisconsin community,” PI: Michael Notaro, 2021-2024, \$348,917.
National Oceanic and Atmospheric Administration (NOAA) Great Lakes Integrated Sciences and Assessment (GLISA), sub-contract through University of Michigan, “Laying the groundwork for high-resolution climate projections for the Great Lakes region using a convection-permitting regional climate model interactively coupled to a 3D lake model: GLISA bridge year,” UW PI: Michael Notaro, 2020-2022, \$34,660.
Department of Energy (DOE), “Reducing uncertainties in biogeochemical interactions through Synthesis and Computation (RUBISCO) scientific focus area (SFA),” UW PI: Michael Notaro, 2020-2022, \$50,000.
Southern Peru Copper Corporation, “Season-ahead drought prediction in southern Peru to support water resources management,” PI: Paul Block, co-PI: Michael Notaro, 2019-2022, \$331,980.
National Oceanic and Atmospheric Administration (NOAA) Great Lakes Integrated Sciences and Assessment (GLISA), sub-contract through University of Michigan, “Laying the groundwork for high-resolution climate projections for the Great Lakes region using a convection-permitting regional climate model interactively coupled to a 3D lake model,” UW PI: Michael Notaro, 2019-2022, \$68,642.
National Oceanic and Atmospheric Administration (NOAA), “Process-based evaluation of the representation of lake-effect snowstorms in the Great Lakes region among CMIP6 Earth System Models,” PI: Michael Notaro, 2018-2022, \$225,901.
Southern Peru Copper Corporation, “2018 JFM precipitation prediction for southern Peru: season-ahead drought prediction in southern Peru to support water resources management,” PI: Paul Block, co-PI: Michael Notaro, 2017-2018, \$18,174.
National Aeronautics and Space Administration, “Evaluating and advancing the representation of lake-atmosphere interactions and resulting heavy lake-effect snowstorms across the Laurentian Great Lakes Basin within the NASA-Unified Weather Research and Forecasting Model,” PI: Michael Notaro, 2017-2021, \$994,967.
Wisconsin Alumni Research Foundation, University of Wisconsin-Madison Fall Competition, “Remote-sensing assessment of terrestrial ecosystem vulnerability to drought across the diverse national parks of the western

United States,” PI: Michael Notaro, 2017-2018, \$35,246.

National Science Foundation, “Does Northern Hemisphere snow cover influence mid-latitude cyclone trajectories? Weather system implications for a changing climate,” PI: Ankur Desai, co-PI: Michael Notaro, 2017-2020, \$168,340.

Alliant Energy, “Climate risk assessment for Alliant Energy’s Riverside Energy Center,” PI: Stephen Vavrus, co-PI: Michael Notaro, 2016-2017, \$63,250.

Southern Peru Copper Corporation, “Season-ahead drought prediction in southern Peru to support water resources management,” PI: Paul Block, co-PI: Michael Notaro, 2015-2017, \$232,327.

National Science Foundation, “Collaborative research: P2C2-Last Interglacial Earth System: Testing transient climate and ice-sheet simulations with a proxy-data network,” PI: Feng He, co-PI: Michael Notaro, 2015-2018, \$100,007.

Michigan Department of Environmental Quality, “Climate change and AIS modeling,” PI: Anne Garwood, PI (UW): Michael Notaro, 2015-2016, \$98,475.

Department of Energy (DOE) SciDAC, “Evaluation of the large-scale and regional climatic responses across North Africa to natural variability in oceanic modes and terrestrial vegetation among the CMIP5 models,” PI: Michael Notaro, 2014-2017, \$599,712.

National Science Foundation (NSF), “Statistical and dynamical exploration of land-ocean-atmosphere interactions in two contrasting monsoon regions: China and northern Australia,” PI: Michael Notaro, 2014-2017, \$231,216.

Northeast Climate Science Center (CSC), “Development of dynamically-based 21st century projections of snow, lake ice, and winter severity for the Great Lakes Basin to guide wildlife-based adaptation planning, with emphasis on deer and waterfowl,” PI: Michael Notaro, 2014-2016, \$142,033.

United States Department of Agriculture (USDA) Forest Service Southern Research Station, “Role of forest ecosystems in mitigating climate change impacts through land-surface energy and water processes, 2nd phase,” PI: Zhengyu Liu, Co-PI: Michael Notaro, 2014-2015, \$40,000.

Climate, People, and Environment Program (CPEP) of UW-Madison, “Observed decadal variability in North African-Middle Eastern dust storm activity,” PI: Michael Notaro, 2014-2015, \$9,000.

Wisconsin Department of Health Services, “Assessment of flood risk across Wisconsin’s Upper Fox River Basin in response to heavy precipitation events,” PI: Steve Vavrus, Co-PI: Michael Notaro, 2014, \$40,000.

National Science Foundation (NSF), “Role of low-level clouds in the accelerated warming of the Great Lakes – A dual observational and regional modeling assessment,” PI: Sergey Kravtsov / Michael Notaro, 2012-2015, \$268,239.

United States Fish and Wildlife Service, “Future changes in weather extremes derived from statistically downscaled climate projections for the Great Lakes region,” PI: Steve Vavrus, Co-PI: Michael Notaro, 2012-2014, \$59,750.

National Park Service (NPS), “Historical and projected climate trends in US national parks for vulnerability analyses and adaptation of resource management,” PI: Jack Williams, Co-PI: Michael Notaro, 2012-2014, \$114,000.

Climate, People, and Environment Program (CPEP) of UW-Madison, “Monitoring the ecological sensitivity of the Great Smoky Mountains National Park to droughts,” PI: Michael Notaro, 2012-2013, \$7,000.

Climate, People, and Environment Program (CPEP) of UW-Madison, “Implications of a warming winter on resident bird populations in the Upper Midwest,” PI: Benjamin Zuckerberg, Co-PI: Michael Notaro, 2012-2013, \$7,000.

Michigan Department of Natural Resources (DNR) contract using Environmental Protection Agency (EPA) funding, “Downscaling climate predictions for Michigan and the Great Lakes,” PI: Michael Notaro / Christover Hoving, 2011-2014, \$324,323.

King Saud University, “Seasonal and Interannual Prediction of Saudi Arabian Dust Storms,” PI: Zhengyu Liu / Michael Notaro / Fahad Alkolibi, 2011-2013, \$103,619.

Climate, People, and Environment Program (CPEP) of UW-Madison, “Regional modeling assessment of the causes and consequences of Middle Eastern dust storms”, PI: Michael Notaro, 2011-2012, \$7,000.

National Oceanic and Atmospheric Administration (NOAA) Great Lakes Environmental Research Laboratory contract using Environmental Protection Agency (EPA) funding, “How will the Great Lakes water levels respond to climate change: Regional modeling for application to decision-making,” PI: Michael Notaro / Brent Lofgren, 2010-2016, \$542,570.

Climate, People, and Environment Program (CPEP) of UW-Madison, “Influence of the Great Lakes on Climate,” PI: Michael Notaro, 2010-2011, \$7,000.

National Oceanic and Atmospheric Administration (NOAA) CCDD, "Observed and Simulated Trends in Heavy Lake Effect Snow Events Across the Great Lakes Basin," PI: Michael Notaro, 2009-2013, \$324,907.

United States Department of Agriculture (USDA) Forest Service Southern Research Station, “Role of forest

ecosystems in mitigating climate change impacts through land-surface energy and water processes," PI: Zhengyu Liu, Co-PI: Michael Notaro, 2009-2012, \$65,062.
National Oceanic and Atmospheric Administration (NOAA) CPPA, "Impact of Vegetation on North American Climate," PI: Michael Notaro, 2008-2013, \$289,812.
Department of Energy (DOE) NICCR, "Ecosystem response to future climate change and the impact of vegetation feedbacks in the Southwest United States," PI: Michael Notaro, 2007-2011, \$337,375.

Advisees: Graduate Students and Postdoctoral Researchers

MS Students: Yan Yu (2011-12)

PhD Students: Kathleen Holman (2010-12), Di Ma (2011-12), Yan Yu (2013-17)

Postdoctoral Researchers: Valerie Bennington (2011), Guangshan Chen (2010-11), Kathleen Holman (2013), Fuyao Wang (2010-13), Azar Zarrin (2009-11), Yafang Zhong (2012-2013)

Committee: Molly Aufforth (2018), Ryan Clare (2018)

Interns: Jacob Dirschel (2019), Isabel Ullrich (2019), Aidan Borkan (2016-2017), Elody Fluck (2011), Marion Weckerle (2011), Adrien Mauss (2007), Kendra Alicia Allen (2005)

Publications (92 total, 35 as first author)

Clare, R.M., A.R. Desai, J.E. Martin, **M. Notaro**, and S.J. Vavrus, 2023: Extratropical cyclone response to projected reductions in snow extent over the Great Plains. *Atmosphere*, 14, <https://doi.org/10.3390/atmos14050783>.

Wang, F., **M. Notaro**, Y., Yu, and J. Mao, 2022: Deficient precipitation sensitivity to Sahel land surface forcings among CMIP5 models. *International Journal of Climatology*, <https://doi.org/10.1002/joc.7737>.

Notaro, M., J. Jorns, and L. Briley, 2022: Representation of lake-atmosphere interactions and lake-effect snowfall in the Laurentian Great Lakes Basin among HighResMIP global climate models. *Journal of the Atmospheric Sciences*, 79, 1325-1347.

Kiefer, M.T., J.A. Andresen, D.G. McCullough, W.J. Baule, and **M. Notaro**, 2021: Extreme minimum temperatures in the Great Lakes region of the United States: A climatology with implications for insect mortality. *International Journal of Climatology*, <https://doi.org/10.1002/joc.7434>.

Notaro, M., et al., 2021: Cold season performance of the NU-WRF regional climate model in the Great Lakes region. *Journal of Hydrometeorology*, **22**, 2423-2454.

Briley, J.L., R.B. Rood, and **M. Notaro**, 2021: Large lakes in climate models: A great lakes case study on the usability of CMIP5. *Journal of Great Lakes Research*, <https://doi.org/10.1016/j.jglr.2021.01.010>.

Fitzpatrick, M.J., W.P. Porter, J.N. Pauli, M.R. Kearney, **M. Notaro**, and B. Zuckerberg, 2020: Future winters present a complex energetic landscape of decreased costs and reduced risk for a freeze-tolerant amphibian, the Wood Frog (*Lithobates sylvaticus*). *Global Change Biology*, 26, 6350-6362.

Yu, Y., O.V. Kalashnikova, M.J. Garaym H. Lee, **M. Notaro**, J.R. Campbell, J. Marquis, P. Ginoux, and G.S. Okin, 2020: Disproving the Bodele depression as the primary source of dust fertilizing the Amazon Rainforest. *Geophysical Research Letters*, 47, <https://doi.org/10.1029/2020GL088020>.

Notaro, M., F. Wang, Y. Yu, and J. Mao, 2020: Projected changes in the terrestrial and oceanic regulators of climate variability across sub-Saharan Africa. *Climate Dynamics*, 55, 1031-1057.

Yu, Y., J. Mao, P.E. Thornton, **M. Notaro**, S.D. Wullschlenger, X. Shi, F.M. Hoffman, and Y. Wang, 2020: Quantifying the drivers and predictability of seasonal changes in African fire. *Nature Communications*, <https://doi.org/10.1038/s41467-020-16692-w>.

Yu, Y., and **M. Notaro**, 2020: Observed land surface feedbacks on the Australian monsoon system. *Climate Dynamics*, 54, 3021-3040.

Delaney, F., P. Ng, K. Dokoska, G. Milner, K. Potter, and **M. Notaro**, 2020: Guide to conducting a climate change analysis at the local scale: Lessons learned from Durham region. Ontario Climate Consortium, Toronto, Ontario.

Notaro, M., F. Wang, and Y. Yu, 2019: Elucidating observed land surface feedbacks across sub-Saharan Africa. *Climate Dynamics*, 53, 1741-1763.

Notaro, M., K. Emmett, and D. O'Leary, 2019: Spatio-temporal variability in remotely sensed vegetation greenness across Yellowstone National Park. *Journal of Remote Sensing*, 11, 798, [doi:10.3390/rs11070798](https://doi.org/10.3390/rs11070798).

Yan, B., J. Mao, X. Shi, F.M. Hoffman, **M. Notaro**, et al., 2019: Predictability of tropical vegetation greenness using sea surface temperatures. *Environmental Research Communications*, <https://doi.org/10.1088/2515-7620/ab178a>.

Yu, Y., O.V. Kalashnikova, M.J. Garay, and **M. Notaro**, 2018: Climatology of Asian dust activation and transport potential based on MISR satellite observations and trajectory analysis. *Atmospheric Chemistry and Physics*, 19, 363-378.

Gonzalez, P., F. Wang, **M. Notaro**, D. Vimont, and J. Williams, 2018: Disproportionate magnitude of climate

- change in the United States national parks. *Environmental Research Letters*, 13, 104001.
- Notaro**, M., 2018: Enhancement of vegetation-rainfall feedbacks on the Australian summer monsoon by the Madden-Julian Oscillation. *Climate Dynamics*, 51, 3093-3109.
- Yu, Y., M. **Notaro**, F. Wang, J. Mao, X. Shi, and Y. Wei, 2018: Validation of a statistical methodology for extracting vegetation feedbacks: Focus on North African ecosystems in the Community Earth System Model. *Journal of Climate*, 31, 1565-1586.
- Wu, Shu, M. **Notaro**, S. Vavrus, E. Mortensen, R. Montgomery, J. de Pierola, and P. Block, 2018: Efficacy of tendency and linear inverse models to predict southern Peru's rainy season precipitation, *International Journal of Climatology*, 38, 2590-2604.
- Markus, M., J. Angel, G. Byard, S. McConkey, C. Zhang, X. Cai, M. **Notaro**, and M. Ashfaq, 2018: Communicating the impacts of projected climate change on heavy rainfall using a weighted ensemble approach. *Journal of Hydrologic Engineering*, 23(4), 04018004.
- Mortensen, E., S. Wu, M. **Notaro**, S. Vavrus, R. Montgomery, J. De Piérola, C. Sánchez, and P. Block, 2018: Regression-based season-ahead drought prediction for southern Peru conditioned on large-scale climate variables. *Hydrology and Earth System Sciences*, 22, 287-303.
- Yu, Y., O.V. Kalashnikova, M. Garay, H. Lee, and M. Notaro, 2018: Identification and characterization of dust source regions across North Africa and the Middle East using MISR satellite observations. *Geophysical Research Letters*, doi.org/10.1029/2018GL078324.
- Zhong, Y., M. **Notaro**, and S. Vavrus, 2018: Spatially variable warming of the Laurentian Great Lakes: an interaction of bathymetry and climate. *Climate Dynamics*, doi.org/10.1007/s00382-018-4481-z.
- Yu, Y., M. **Notaro**, F. Wang, J. Mao, X. Shi, and Y. Wei, 2017: Observed vegetation-climate feedbacks in the Sahel: Is the classic albedo feedback mechanism truly dominant? *Nature Communications*, 8, doi:10.1038/s41467-017-02021-1.
- Wang, F., Y. Yu, M. **Notaro**, J. Mao, X. Shi, and Y. Wei, 2017: Advancing a model-validated statistical method for decomposing the key oceanic drivers of regional climate: Focus on northern and tropical African climate variability in the Community Earth System Model (CESM). *Journal of Climate*, 30, 8517-8537.
- Notaro**, M., G. Chen, Y. Yu, F. Wang, and A. Tawfik, 2017: Regional climate modeling of vegetation feedbacks on the Asian-Australian monsoon systems. *Journal of Climate*, 30, 1553-1582.
- Winslow, L.A., G.J.A. Hansen, J.S. Read, and M. **Notaro**, 2017: Large-scale modeled contemporary and future water temperature estimates for 10774 Midwestern U.S. lakes. *Nature Scientific Data*, doi:10.1038/sdata.2017.53.
- Notaro**, M., 2017: Does climate affect the world's vegetation – or is it the other way around? *Scientia*.
- Yu, Y., M. Notaro, O. Kalashnikova, and M. J. Garay, 2016: Climatology of summer Shamal wind in the Middle East. *Journal of Geophysical Research-Atmospheres*, 121, 289-305.
- Sultaire, S., J.N. Pauli, K.J. Martin, M.W. Meyer, M. **Notaro**, and B. Zuckerberg, 2016: Climate change surpasses land use change in the contracting range boundary of a winter-adapted mammal. *Proceedings of the Royal Society B*, 283, 20153104, <http://dx.doi.org/10.1098/rspb.2015.3104>.
- Zhong, Y., M. **Notaro**, and S. J. Vavrus, 2016: Recent accelerated warming of the Laurentian Great Lakes: Physical drivers. *Limnology and Oceanography*, 61, 1762-1786.
- Notaro**, M., Y. Zhong, S. Vavrus, M. Schummer, L. Van Den Elsen, J. Coluccy, and C. Hoving, 2016: Projected influences of changes in weather severity on autumn-winter distributions of dabbling ducks in the Mississippi and Atlantic Flyways during the twenty-first century. *Plos One*, 11(12), e0167506.
- Notaro**, M., V. Bennington, and B. Lofgren, 2015: Dynamical downscaling-based projections of Great Lakes' water levels. *J. Climate*, 28, 9721-9745.
- Notaro**, M., Y. Yu, and O. Kalashnikova, 2015: Regime shift in Arabian dust activity, triggered by persistent Fertile Crescent drought. *Journal of Geophysical Research-Atmospheres*, 120, 10229-10249.
- Yu, Y., M. **Notaro**, Z. Liu, F. Wang, F. Alkolibi, E. Fadda, and F. Bakhrjy, 2015: Climatic controls on the interannual to decadal variability in Saudi Arabian dust activity: Towards the development of a seasonal dust prediction model. *Journal of Geophysical Research-Atmospheres*, doi:10.1002/2014JD022611.
- Vavrus, S., M. **Notaro**, and D. Lorenz, 2015: Interpreting climate model projections of extreme weather events. *Weather and Climate Extremes*, 10, 10-28.
- Notaro**, M., V. Bennington, and S. Vavrus, 2015: Dynamically downscaled projections of lake-effect snow in the Great Lakes Basin. *Journal of Climate*, 28, 1661-1684.
- Hoving, C.L., and M. Notaro, 2015: Ice, snow, and swamp: Managing deer in Michigan's changing climate. *Michigan Journal of Sustainability*, 3, spring 2015.
- Notaro**, M., D. Lorenz, C. Hoving, and M. Schummer, 2014: Twenty-first century projections of snowfall and winter severity across central-eastern North America. *Journal of Climate*, 27, 6526-6550.

- Wang, F., **M. Notaro**, Z. Liu, and G. Chen, 2014: Observed local and remote influences of vegetation on the atmosphere across North America using a model-validated statistical technique that first excludes oceanic forcings. *Journal of Climate*, 27, 362-382.
- Bennington, V., **M. Notaro**, and K.D. Holman, 2014: Improving climate sensitivity of deep lakes within a regional climate model and its impact on simulated climate. *Journal of Climate*, 27, 2886-2911.
- Holman, K.D., D.J. Lorenz, and **M. Notaro**, 2014: Influence of the background state on Rossby wave propagation into the Great Lakes region based on observations and model simulations. *Journal of Climate*, 27, 9302-9322.
- Wyroll, K.H., and **M. Notaro**, 2014: Aboriginal landscape burning and its impact on the summer monsoon of northern Australia. *Australian Archaeology*, 79, 109-115.
- Janowiak, M.K.; Iverson, L.; Mladenoff, D.J.; Peters, E.; Wythers, K.R.; Xi, W.; Brandt, L.A.; Butler, P.R.; Handler, S.D.; Shannon, P.D.; Swanston, C.W.; Parker, L.R.; Amman, A.J.; Bogaczyk, B.; Handler, C.; Lesch, E.; Reich, P.B.; Matthews, S.; Peters, M.; Prasad, A.; Khanal, S.; Liu, F.; Bal, T.; Bronson, D.; Burton, A.; Ferris, J.; Fosgitt, J.; Hagan, S.; Johnston, E.; Kane, E.; Matula, C.; O'Connor, R.; Higgins, D.; St. Pierre, M.; Daley, J.; Davenport, M.; Emery, M.R.; Fehring, D.; Johnson, G.; Neitzel, D.; **Notaro**, M.; Rissman, A.; Rittenhouse, C.; Ziel, R., 2014: Forest ecosystem vulnerability assessment and synthesis for northern Wisconsin and western Upper Michigan: A report from the Northwoods Climate Change Response Framework. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station.
- Notaro**, M., A. Zarrin, S. Vavrus, and V. Bennington, 2013: Simulation of heavy lake-effect snowstorms across the Great Lakes Basin by RegCM4: Synoptic climatology and variability. *Monthly Weather Review*, 141, 1990-2014.
- Notaro**, M., K. Holman, A. Zarrin, E. Fluck, S. Vavrus, and V. Bennington, 2013: Influence of the Laurentian Great Lakes on regional climate. *Journal of Climate*, 26, 789-804.
- Notaro**, M., F. Alkolibi, E. Fadda, and F. Bakhrjy, 2013: Trajectory analysis of Saudi Arabian dust storms. *Journal of Geophysical Research-Atmospheres*, 118, 6028-6043.
- Yu, Y., **M. Notaro**, Z. Liu, O. Kalashnikova, F. Alkolibi, E. Fadda, and F. Bakhrjy, 2013: Assessing temporal and spatial variations in atmospheric dust over Saudi Arabia through satellite, radiometric, and station data. *Journal of Geophysical Research-Atmospheres*, 118, 13253-13264.
- Vavrus, S., **M. Notaro**, and A. Zarrin, 2013: The role of ice cover in heavy lake-effect snowstorms across the Great Lakes Basin as simulated by RegCM4. *Monthly Weather Review*, 141, 148-165.
- Wang, F., Z. Liu, and **M. Notaro**, 2013: Extracting the dominant SST modes impacting North America's observed climate. *Journal of Climate*, 26, 5434-5452.
- Ma, D., Z. Liu, S. Lu, **M. Notaro**, X. Rong, G. Cheng, and F. Wang, 2013: Short-term climatic impacts of afforestation in the East Asian monsoon region. *Chinese Science Bulletin*, 58, 2073-2081.
- Wyroll, K.H., F. McRobie, **M. Notaro**, and G. Chen, 2013: Indigenous vegetation burning practices and their impact on the climate of the northern Australian monsoon region. *Hydrology and Earth System Sciences*, 10, 10313-10332.
- Notaro**, M., J.W. Williams, and D. Lorenz, 2012: 21st century vegetation and land carbon projections for Wisconsin. *Climate Research*, 54, 149-165.
- Notaro**, M., A. Mauss, and J.W. Williams, 2012: Projected vegetation changes for the American Southwest: Combined dynamical modeling and bioclimatic envelope approach. *Ecological Applications*, 22, 1365-1388.
- Notaro**, M., and D. Gutzler, 2012: Simulated impact of vegetation on climate across the North American monsoon region in CCSM3.5. *Climate Dynamics*, doi: 10.1007/s00382-010-0990-0.
- Wyroll, K.-H., **M. Notaro**, and G. Chen, 2012: A burning question. *Australasian Science*, July/August 2012, 23-25.
- Chen, G.-S., **M. Notaro**, Z. Liu, and Y. Liu, 2012: Simulated local and remote biophysical effects of afforestation over Southeast United States in boreal summer. *Journal of Climate*, 25, 4511-4522.
- Ma, D., **M. Notaro**, Z. Liu, G. Chen, Y. Liu, and S. Lu, 2012: Simulated impacts of afforestation in East China monsoon region as modulated by ocean variability. *Climate Dynamics*, doi:10.1007/s00382-012-1592-9.
- Holman, K.D., A. Gronewold, **M. Notaro**, and A. Zarrin, 2012: Improving historical precipitation estimates over the Lake Superior basin. *Geophysical Research Letters*, 39, L03405, doi:10.1029/2011GL050468.
- Veloz, S., J. Williams, D. Lorenz, **M. Notaro**, S. Vavrus, and D.J. Vimont, 2012: Identifying climatic analogs for Wisconsin under 21st-century climate-change scenarios. *Climatic Change*, doi:10.1007/s10584-011-0261-z.
- Notaro**, M., and A. Zarrin, 2011: Sensitivity of the North American monsoon to antecedent Rocky Mountain snowpack. *Geophysical Research Letters*, 38, L17403, doi: 10.1029/2011GL048803.
- Notaro**, M., G. Chen, and Z. Liu, 2011: Vegetation feedbacks to climate in the global monsoon regions. *Journal of Climate*, 24, 5740-5756.
- Notaro**, M., K.-H. Wyroll, and G. Chen, 2011: Did aboriginal vegetation burning impact on the Australian summer

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- Zhong, Y., Z. Liu, and M. **Notaro**, 2011: A GEFA assessment of observed global ocean influence on US precipitation variability: Discrimination of effects from multiple ocean basins. *Journal of Climate*, 24, 693-707.
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North Africa during the Holocene: Climate variability vs. vegetation feedback. *Geophysical Research Letters* **33**, L22709, doi:10.1029/2006GL028062.

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Wu, L., Z. Liu, R. Gallimore, M. **Notaro**, and R. Jacob, 2005: Modeling surgery: A new way toward understanding Earth climate variability. *Journal of Ocean University of China*, **10**, 306-314.

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Oral Presentations (182)

GLOBE-inspired STEM camps in support of neurodiversity, GLOBE NARM Annual Meeting, November 2023, virtual.

Nature's Navigators STEM Camp: Fostering neurodiversity among autistic youth, UW Extension Fall Conference, November 2023, Madison, WI.

GLOBE citizen science, Master Gardeners Program, Welty Environmental Center, July 2023, Beloit, WI.

Overview of observed climate trends and CMIP5-based statistically downscaled climate projections for Michigan, Consumers Energy meeting, February 2023, virtual.

Next generation regional climate modeling for the Great Lakes region, WICCI Climate-Geospatial Working Groups Collaborative Meeting, January 2023, virtual.

Fostering neurodiversity in support of effective STEM learning, American Meteorological Society Annual Meeting, January 2023, Denver, CO.

Fostering neurodiversity in support of effective STEM learning, American Geophysical Union Fall Meeting, December 2022, Chicago, IL.

School District of Beloit (grades 9-12) Global Learning and Observations to Benefit the Environment (GLOBE) Workshop, October 2022, Beloit, WI.

Historical evaluation of the next generation regional climate model for the Great Lakes region, GLISA Advisory Committee Meeting, October 2022, virtual.

School District of Beloit (grades 6) Global Learning and Observations to Benefit the Environment (GLOBE) Workshop, October 2022, Beloit, WI.

Fostering neurodiversity in support of effective STEM learning, Climate, People, and Environment Program (CPEP) Seminar, University of Wisconsin-Madison, September 2022, Madison, WI.

Student Opportunities in the Nelson Institute Center for Climatic Research, Nelson Institute Graduate Seminar, September 2022, Madison, WI.

Wisconsin climate change, Osher Learning Class, University of Wisconsin-Milwaukee, September 2022, virtual.

Overview of the research and outreach efforts within the Nelson Institute Center for Climatic Research, UW-Extension Natural Resource Institute meeting, June 2022, Madison, WI.

GLOBE observation site set-up and data upload, GLOBE virtual workshop, April 2022, Madison, WI.

Climate change in the Midwest, Worldwide Climate Justice Teach-In, March 2022, Madison, WI.

Representation of lake-atmosphere interactions and lake-effect snowfall in the Laurentian Great Lakes Basin among HighResMIP global climate models, Model Diagnostics Task Force, March 2022, virtual.

Climate Jeopardy, Help Yourself Program, Beloit College, March 2022, Beloit, Wisconsin.

Representation of lake-atmosphere interactions and lake-effect snowfall in the Laurentian Great Lakes Basin among HighResMIP global climate models, American Meteorological Society Annual Meeting, January 2022, virtual.

Representation of lake-atmosphere interactions and lake-effect snowfall in the Laurentian Great Lakes Basin among HighResMIP global climate models, CMIP6 Task Force, January 2022, virtual.

Performance of the NU-WRF regional climate model in the Great Lakes region, American Geophysical Union Fall Meeting, December 2021, virtual.

GLISA Phase 3: In pursuit of the most reliable regional climate projections to guide stakeholders, NOAA Great Lakes Integrated Sciences and Assessments (GLISA) meeting, October 2021, virtual.

The Laurentian Great Lakes: A regional hotspot of climate change, Winchester Public Library, October 2021, virtual.

Climate change in New York City: The Growing Storm, University of Wisconsin-Madison WARF Soundwaves, October 2021, Madison, WI.

School District of Beloit (grades 6, 9-12) Global Learning and Observations to Benefit the Environment (GLOBE) Workshop, October 2021, Beloit, WI.

Performance of the NU-WRF regional climate model in the Great Lakes region, International Association for Great

Lakes Research, May 2021, virtual.

Climate change and its relevance to the Ice Age Trail. Ice Age Trail Alliance Annual Conference, April 2021, virtual.

The next generation of climate modeling for the Great Lakes region. Great Lakes Water Quality Agreement Annex 9 Great Lakes Modeling Workshop, March 2021, virtual.

Are HighResMIP Global Climate Models capable of reasonably capturing lake-effect snow in the Laurentian Great Lakes Basin? American Meteorological Society Conference, January 2021, virtual.

The next generation of climate modeling for the Great Lakes region, NOAA GLISA webinar, October 2020, Madison, WI.

Representation of lake-effect snow in HighResMIP simulations, NOAA Climate Program Office webinar, March 2020, Madison, WI.

Observed and projected climate change in Wisconsin and its implications, First Baptist Church, January 2020, Madison, WI.

Observed land surface feedbacks on the Australian monsoon system, American Meteorological Society Annual Meeting, January 2020, Boston, MA.

Overview of climate change efforts at UW and beyond. Wisconsin Department of Natural Resources Bureau of Law Enforcement 2020 Statewide Meeting, March 2020, Wisconsin Dells, WI.

Representation of lake-effect snow in the HighResMIP simulations, Model Diagnostics Task Force telecon, December 2019, Madison, WI.

Overview of Midwestern climate change with implications to food processing, Midwest Food Products Association, December 2019, Wisconsin Dells, WI.

Environment 2019: Educating and developing excellence in environmental, health, and safety professionals, Federation of Environmental Technologists, October 2019, Pewaukee, WI.

Climate change in Wisconsin with gardening implications. Wisconsin Garden Federation, October 2019, Middleton, WI.

The Laurentian Great Lakes: A regional hotspot of climate change. Weyenberg Public Library, September 2019, via skype.

Blessed Trinity Global Learning and Observations to Benefit the Environment (GLOBE) Workshop, August 2019, Cross Plains, WI.

Climate change in Wisconsin with gardening implications. Wisconsin Garden Club Federation Convention, May 2019, Madison, WI.

Advancing climate science education, inquiry, and literacy across rural Wisconsin communities. Ice Age Trail Alliance Educators Summit, March 2019, Stevens Point, WI.

The adventures of an atmospheric scientist. University of Wisconsin-PEOPLE program, Madison West High School, March 2019, Madison, WI.

Progress toward the development and evaluation of a state-of-the-art non-hydrostatic regional climate model for studying lake-atmosphere interactions: Focus on simulating lake-effect snowstorms in the Great Lakes Basin, American Meteorological Society Conference, January 2019, Phoenix, AZ.

Elucidating observed land surface feedbacks across sub-Saharan Africa, American Geophysical Union Fall Meeting, December 2018, Washington, D.C.

Advancing climate science education, inquiry, and literacy across rural Wisconsin communities, University of Wisconsin-Madison Chaos and Complexity Seminar, December 2018, Madison, WI.

Elucidating observed land surface feedbacks across sub-Saharan Africa, Department of Energy Primary Investigators Meeting, November 2018, Bethesda, MD.

Evaluation of the representation of terrestrial feedbacks across sub-Saharan Africa in the CMIP5 Earth System Models, Department of Energy Primary Investigators Meeting, November 2018, Bethesda, MD.

Observed and projected climate change in Wisconsin and its implications, Butternut Elementary and High School, October 2018, Butternut, WI.

Wisconsin's changing climate and its ecological implications, UW Extension Meeting, September 2018, Madison, WI.

Butternut School Global Learning and Observations to Benefit the Environment (GLOBE) Workshop, August 2018, Butternut, WI.

The Nelson Institute Center for Climatic Research: Advancing applied research on climate variability and change in a rapidly transitioning world, June 2018, Wisconsin Climate Services Summit, Madison, WI.

Overview of dynamical downscaling dataset for Midwest United States, May 2018, Minnesota Resiliency Collaborative webinar, Madison, WI.

Wildlife implications of changing winter severity in the Great Lakes Basin: Collaborative investigation to guide regional adaptation planning, April 2018, National Climate Change and Wildlife Science Center webinar, Madison, WI.

Extracting the oceanic and terrestrial drivers of North African hydrological variability, April 2018, State University of New York at Albany, Atmospheric Sciences Research Center / Department of Atmospheric and Earth Sciences Joint Seminar, Albany, NY.

Remote sensing assessment of phenology in Yellowstone National Park, March 2018, Monica Turner's lab, Madison, WI.

Do state-of-the-art CMIP5 Earth System Models accurately represent observed vegetation-rainfall feedbacks? Focus on the Sahel, January 2018, American Meteorological Society Annual Meeting, Austin, TX.

Observed and projected climate change in Wisconsin and its implications, November 2017, Waunakee Public Library, Waunakee, WI.

Observed and projected climate change and its implications, November 2017, Wisconsin Science Festival, University of Wisconsin-Parkside, Kenosha, WI.

Dynamically downscaled hydrological projections for the Great Lakes Basin, October 2017, Navigating the Future of Water Conference, Milwaukee, WI.

Wildlife implications of changing winter severity in the Great Lakes Basin: Collaborative investigation to guide regional adaptation planning, October 2017, Northeast Climate Science Center webinar, Madison, WI.

Potential impacts of changing winter conditions during the 21st century on the migratory behavior of dabbling ducks in eastern North America, August 2017, Ecological Society of America Annual Meeting, Portland, OR.

Projected climatic and limnological changes and their potential implications for the spread of aquatic invasive species in the Upper Midwest United States, March 2017, webinar to Department of Environmental Quality, Department of Natural Resources, and United States Geological Survey, Madison, WI.

Overview of observed and projected climate change and its implications, March 2017, St. Maria Goretti School, Madison, WI.

Regional climate modeling of vegetation feedbacks on the Asian-Australian monsoon systems, January 2017, American Meteorological Society Conference, Seattle, WA.

Regional climate modeling of vegetation feedbacks on the Asian-Australian monsoon systems, December 2016, American Geophysical Union Fall Meeting, San Francisco, CA.

Observed vegetation feedbacks in the Sahel: Is the classic albedo feedback mechanism truly dominant?, November 2016, Department of Energy RGCM Primary Investigator Meeting, Washington D.C.

Validation of a statistical methodology for extracting vegetation feedbacks: Focus on North African ecosystems in the Community Earth System Model, November 2016, Department of Energy RGCM Primary Investigator Meeting, Washington D.C.

Climate change projections and implications for the Great Lakes region, October 2016, University of Wisconsin-Madison, Weston Roundtable lecture, Madison, WI.

Overview of observed and projected climate change and its implications, October 2016, University of Wisconsin-Madison InterAg 155 class, Madison, WI.

Historical and future projected climate change in the Upper Midwest United States, as Relevant to Plant Communities, September 2016, Wisconsin Initiative on Climate Change Impacts (WICCI) Adaptation Workshop: Preparing Wisconsin's Plant Communities for an Uncertain Future, Madison, WI.

Regional climate modeling of vegetation feedbacks on the Asian-Australian monsoon systems, September 2016, University of Wisconsin-Madison Climate, People, and Environment Program (CPEP) seminar, Madison, WI.

Projected changes in winter severity for the 21st century and implications for the migratory behavior of dabbling ducks in eastern North America, July 2016, North American Congress for Conservation Biology, Madison, WI.

Climate change in Wisconsin: Historical trends, projections, impacts, and adaptation, June 2016, Forest County Potawatomi Community (FPCP) Climate Change Adaptation Workshop, Crandon, WI.

Potential impacts of changing winter conditions during the 21st century on the migratory behavior of dabbling ducks in eastern North America, January 2016, Midwest Fish and Wildlife Conference, Grand Rapids, Michigan.

Evaluation of the large-scale and regional climatic response across North Africa to natural variability in oceanic modes and terrestrial vegetation, October 2015, Department of Energy Biogeochemistry Feedbacks webinar, Madison, Wisconsin.

Shift in Arabian dust activity, triggered by persistent Fertile Crescent drought, October 2015, Climate, People, and Environment Program seminar, Madison, Wisconsin.

The path to collaboration sometimes resembles falling dominoes, September 2015, Northeast Climate Science Center Retreat, Green Bay, Wisconsin.

Climate change in Wisconsin, with gardening implications, September 2015, Mount Horeb Gardening Club, Mount Horeb, Wisconsin.

Dynamically downscaled projections of lake-effect snow in the Great Lakes Basin, May 2015, American Geophysical Union Joint Assembly, Montreal, Canada.

Elucidating the primary mechanisms responsible for the rapid warming of the Laurentian Great Lakes, May 2015, American Geophysical Union Joint Assembly, Montreal, Canada.

Dynamical downscaling-based projections of Great Lakes' water levels, May 2015, University of Wisconsin-Madison Water Symposium, Madison, Wisconsin.

Application of dynamical downscaling to generate projections of winter severity, with implications for waterfowl migration and deer survival, March 2015, Joint webinar of the Northeast Climate Science Center and Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative, Madison, Wisconsin.

Development of climate projections for the Great Lakes region, November 2014, Webinar presentation to the Great Lakes Water Quality Agreement Climate Annex Subcommittee, Madison, Wisconsin.

MET-606 Historic and projected Wisconsin climate change, impacts, and adaptation, October 2014, University of Wisconsin-Madison, Molecular and Environmental Toxicology (MET-606) class, Madison, Wisconsin.

Overview of relevant research on climate change projections/adaptation and dust storms, August 2014, Meeting with Iranian visitors through the World Learning Initiative, Madison, Wisconsin.

Climate change 101, July 2014, AINL G-WOW (Gikinoo'wizhiwe Onji Waaban) Changing Climate, Changing Culture Institute, Ashland, Wisconsin.

Tips and tools for educating about climate change and taking action, July 2014, AINL G-WOW (Gikinoo'wizhiwe Onji Waaban) Changing Climate, Changing Culture Institute, Ashland, Wisconsin.

Addressing the climate change controversy, July 2014, AINL G-WOW (Gikinoo'wizhiwe Onji Waaban) Changing Climate, Changing Culture Institute, Ashland, Wisconsin.

Dynamically downscaled projections of lake-effect snow in the Great Lakes Basin, June 2014, Adaptation in the Great Lakes Region Conference, Ann Arbor, Michigan.

Dynamically downscaled projections of lake-effect snow in the Great Lakes Basin, June 2014, National Oceanic and Atmospheric Administration Great Lakes Environmental Research Laboratory, Ann Arbor, Michigan.

Dynamically downscaled projections of lake-effect snow in the Great Lakes Basin, June 2014, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Regional climate variability, feedbacks, and projections, June 2014, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Cold-season climate projections for the Midwest and Great Lakes Basin, with implications to regional wildlife, April 2014, Nelson Institute Earth Day Conference, Madison, Wisconsin.

Wisconsin climate change, April 2014, Panel on Climate Change and Wisconsin Hunting and Fishing, Stevens Point, Wisconsin.

Summary of CCR's research findings, needs, and gaps related to Midwest climate change, March 2014, Midwest Regional Climate Meeting, Champaign, Illinois.

Simulation of heavy lake-effect snowstorms across the Great Lakes Basin by RegCM4, December 2013, American Geophysical Union Conference, San Francisco, California.

Projecting future water levels of the Laurentian Great Lakes, December 2013, American Geophysical Union Conference, San Francisco, California.

Statistically downscaled climate projections for central-eastern North America, with application to developing projections of winter severity, November 2013, Coping with extreme weather and climate change: Management strategies for the Upper Midwest, La Crosse, Wisconsin.

Ecological response in the Great Smoky Mountains National Park to the 2007-2008 drought, November 2013, Climate, People, and Environment Program (CPEP) seminar, Madison, Wisconsin.

Projected change in heavy lake-effect snowstorms across the Great Lakes Basin, November 2013, Climate, People, and Environment Program (CPEP) seminar, Madison, Wisconsin.

21st century projections of ameliorated winter conditions, yet more intense snowstorms, across the central-eastern North American Landscape Conservation Cooperatives, November 2013, Webinar for the Science Team for Climate Change and Forests, Madison, Wisconsin.

Understanding a world of climatic extremes, October 2013, CCR 50th Anniversary, Madison, Wisconsin.

Tutorial on the manipulation of netcdf climate data: Application to statistically downscaled climate projections, October 2013, The Wildlife Society Conference, Milwaukee, Wisconsin.

Projected vegetation changes for the American Southwest: Combined dynamic modeling and bioclimatic-envelope approach, October 2013, The Wildlife Society Conference, Milwaukee, Wisconsin.

21st century projections of ameliorated winter conditions, yet more intense snowstorms, across the central-eastern North American Landscape Conservation Cooperatives, October 2013, The Wildlife Society Conference, Milwaukee, Wisconsin.

Projected change in heavy lake-effect snowstorms across the Great Lakes Basin, September 2013, University of Illinois, Champaign, Illinois.

Simulation of heavy lake-effect snowstorms across the Great Lakes Basin by RegCM4, June 2013, Annual Conference on Great Lakes Research, West Lafayette, Indiana.

Statistical downscaling of climate projections across the Landscape Conservation Cooperatives of central-eastern North America, December 2012, Midwest Fish and Wildlife Conference, Wichita, Kansas.

Extracting the dominant SST modes impacting North America's observed climate, December 2012, American Geophysical Union Conference, San Francisco, California.

Influence of the Laurentian Great Lakes on regional climate, December 2012, American Geophysical Union Conference, San Francisco, California.

Wisconsin climate change, June 2012, College Days, Madison, Wisconsin.

Coupling the Regional Ocean Modeling System (ROMS) to RegCM4 for the Great Lakes Basin, ICTP Workshop, Trieste, Italy.

RegCM4-ROMS coupling, May 2012, ICTP Workshop, Trieste, Italy.

Influence of the Laurentian Great Lakes on regional climate, May 2012, ICTP Workshop, Trieste, Italy.

Sensitivity of the North American monsoon to antecedent Rocky Mountain snowpack, ICTP Workshop, Trieste, Italy.

Heavy lake-effect snowstorms in the Great Lakes Basin, May 2012, ICTP Workshop, Trieste, Italy.

Wisconsin climate change, April 2012, Wisconsin Climate Change and Jobs Forum, Madison, Wisconsin.

Overview of my current research: Regional climate modeling, land-atmosphere interactions, and Wisconsin climate change, March 2012, CCR/SAGE Symposium, Madison, Wisconsin.

Sensitivity of the North American monsoon to antecedent Rocky Mountain snowpack, February 2012, Association of American Geographers Conference, New York, New York.

Sensitivity of the North American monsoon to antecedent Rocky Mountain snowpack, December 2011, American Geophysical Union Conference, San Francisco, California.

Sensitivity of the North American monsoon to antecedent Rocky Mountain snowpack, October 2011, Climate, People, and Environment Program (CPEP), UW-Madison.

The Center for Climatic Research: State of the Center, September 2011, Planning Workshop, J. Williams and M. Notaro, UW-Madison.

The complex seasonal cycle of ecohydrology in the Southwest United States, August 2011, Ecological Society of America Conference, Austin, Texas.

Overview of research on land-atmosphere interactions at the Center for Climatic Research, April 2011, King Saud University, Riyadh, Saudi Arabia.

Simulated influence of the Great Lakes on climate, March 2011, Climate, People, and Environment Program (CPEP) / UW Madison.

Simulated impact of vegetation on climate across the North American monsoon region, January 2011, American Meteorological Society Conference, Seattle.

The changing climate of Wisconsin, November 2010, Upper Iowa University, Madison.

Vegetation feedbacks to climate in the global monsoon regions, November 2010, Climate, People, and Environment Program (CPEP) / UW Madison.

Simulated vegetation feedbacks in the North American monsoon region, August 2010, Ecological Society of America Conference, Pittsburgh, Pennsylvania.

The future of Wisconsin's forests, June 2010, Wisconsin Initiative on Climate Change Impacts Forestry Working Group meeting, Madison.

Climate change in northern Wisconsin, April 2010, Science Applications and Needs Workshop for the Climate Change Response Framework, Madison.

Four-hour training lectures on weather and climate, March 2010, United States Geological Survey training workshop, Madison.

Climate change projections for Wisconsin, February 2010, Shared Landscapes Initiative Workshop, Rhinelander, Wisconsin.

Impact of vegetation on the global monsoon regions, January 2010, American Meteorological Society Conference, Atlanta, Georgia.

The Center for Climatic Research: Past, present, and future, November 2009, Nelson Institute 30th Anniversary of

Environmental Studies Certificate.

Climate change projections for Wisconsin, October 2009, MATC Global Warming Teach-In.

Downscaled climate change projections for Wisconsin, September 2009, Lake Michigan: State of the Lake and Great Lakes Beach Association meeting, Milwaukee, Wisconsin.

Downscaling projections of climate change for Wisconsin and the Midwest, September 2009, United States Geological Society Regional Climate Science Hub meeting, Madison.

Projections of future climate change's impacts on vegetation in the Southwest United States: From plant functional types to species, August 2009, Ecological Society of America Conference, Albuquerque, New Mexico.

Vegetation feedbacks over the global monsoon regions in CCSM3.5, June 2009, Community Climate System Workshop Meeting, Breckenridge, Colorado.

How will plants respond to future climate change in the Southwest United States, April 2009, Sustainability and the Global Environment seminar, UW-Madison.

The changing climate of Wisconsin, April 2009, Going Green Wisconsin Expo.

Wisconsin's future climate, March 2009, Bracing for Impact: Climate Change Adaptation in Wisconsin, Wisconsin Initiative on Climate Change Impacts seminar at Wednesday Night at the Lab, UW-Madison.

Climate modeling 101, March 2009, Wildlife Working Group of the Wisconsin Initiative on Climate Change Impacts, Madison.

Climate change in Wisconsin, February 2009, Wisconsin Chapter of the Soil and Water Conservation Society Annual Conference, Madison.

Presentation on storm chasing and climate change to Lego League, Memorial High School, October 2008, Madison.

Modeling and statistical assessment of vegetation-climate interactions, September 2008, NOAA CPPA PI meeting.

An overview of global and regional climate change, November 2008, Upper Iowa University.

Observed and simulated vegetation of the Southwest United States: Seasonal cycle and climate change, November 2008, Climate, People, and Environment Program (CPEP).

Response of the mean global vegetation distribution to interannual climate variability, August 2008, Ecological Society of America Conference – Milwaukee.

A snapshot of CCR's research into climate change and water resources, July 2008, Presentation to ITOCHU Corporation, Madison.

Climate change from a Wisconsin perspective, April 2008, Wisconsin Water Association Water Efficiency Seminar, Madison.

Examining patterns, variability, and the seasonal cycle of vegetation in the Southwest United States, March 2008, Climate, People, and Environment Program (CPEP).

Observed and predicted climate change with a focus on Wisconsin, January 2008, Southwest Alliance of Neighborhoods, Madison.

Response of the mean global vegetation distribution to interannual climate variability, January 2008, American Meteorological Society Conference, New Orleans, Louisiana.

Ongoing climate change research at the Center for Climatic Research, December 2007, Upper Iowa University.

An overview of Wisconsin climate change and its relevance to the golf industry, November 2007, keynote speaker, Golf Turf Symposium, Kohler, Wisconsin.

The future of the Great Lakes as assessed by a regional climate model, August 2007, Wisconsin Department of Natural Resources.

Climate change in the Great Lakes region, July 2007, Wisconsin DNR Coastal Zone Working Group.

An Overview of global and regional climate change: What can science tell us and how does it affect community resources? June 2007, Preparing for Climate Change community workshop, Madison.

Climate-ecosystem modeling and applications, May 2007, Chicago Chapter of the American Statistical Association Conference, Chicago.

Observed trends in Wisconsin and the Great Lakes Basin, April 2007, Wisconsin Department of Natural Resources.

On the cause of abrupt ecosystem collapse in northern Africa during the Holocene: Climate variability vs. vegetation feedbacks, March 2007, AOS colloquium seminar, UW-Madison.

Combined statistical and dynamical assessment of the simulated negative vegetation feedback on North African annual precipitation during the mid-Holocene, February 2007, Climate, People, and Environment Program (CPEP) / UW Madison.

Abrupt North African ecosystem change during the mid-Holocene and the role of a negative vegetation feedback on annual precipitation, December 2006, American Geophysical Union Conference, San Francisco, California.

Potential impact of the Eurasian boreal forest on North Pacific climate variability, December 2006, American Geophysical Union Conference, San Francisco, California.

Analysis of global vegetation feedbacks, with applications to North Africa and Asia, December 2006, NASA Ames, Ames, California.

Abrupt North African ecosystem change during the mid-Holocene and the role of a negative vegetation feedback on annual precipitation, December 2006, AOS Seminar / UW-Madison.

Abrupt North African ecosystem change during the mid-Holocene and the role of a negative vegetation feedback on annual precipitation, November 2006, Sustainability and the Global Environment seminar, UW-Madison.

Observed vegetation-climate feedbacks in the United States, August 2006, NOAA CPPA PI meeting, Tucson, Arizona.

The endangered Arctic, April 2006, Take Back Our Future: Earth Day Teach-In / UW-Madison.

Potential impact of the Eurasian boreal forest on North Pacific climate variability, April 2006, AOS Seminar / UW-Madison.

Impact of the Asian boreal forest on North Pacific SSTs, December 2005, Climate, People, and Environment Program (CPEP) seminar / UW Madison.

Observed vegetation-climate feedbacks in the United States, February 2005, Climate, People, and Environment Program (CPEP) seminar / UW Madison.

Past and potential future changes in global vegetation and climate due to rising CO₂, November 2004, Climate, People, and Environment Program (CPEP) / UW Madison.

Simulated and observed pre-industrial to modern vegetation and climate changes, October 2004, NOAA 29th Climate Diagnostics and Prediction Workshop, Madison.

Simulated vegetation and climate changes from rising levels of greenhouse gases, September 2004, International Arctic meeting, Madison.

NCL (NCAR Command Language) tutorial for CCR, April 2004, UW Madison.

Model and observational analysis of the impact of the PNA pattern on the Northeast's regional winter climate, November 2002, Climate, People, and Environment Program, UW-Madison.

Interviews and Media Releases (101)

Badger Herald, "Experts consider future of Wisconsin at annual Climate Change Symposium," 2023.

University of Wisconsin Extension website, "A look into the camp welcoming autistic youth into nature and STEM," 2023.

Nelson Institute In Commons Newsletter, "Learning without limits: At The Sky's the Limit, a STEM camp for autistic youth, campers aren't "allowed" to be themselves; they just are.," 2023.

University of Wisconsin news, "The Sky's the Limit: Autistic youth explore science on their terms at STEM camp," 2023.

Nelson Institute website, "A SRS success," 2023.

Nelson Institute website, "Nelson around the world," 2023/105.9FM, "Welty Center to host the Sky's the Limit Camp," 2023.

Milwaukee Journal Sentinel, "Great Lakes ice cover reaches historic low. Here's what we know," 2023.

Washington Post, "When winter gets weird: Thundersnow, frost quakes and more," 2023.

Milwaukee Journal Sentinel, "It's mid-January and the Great Lakes are virtually ice-free. That's a problem.," 2023.

Nelson Institute website, "UW establishes Rural Partnership Institute," 2023.

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