Ithaca College · Department of Physics & Astronomy eleibensperger@ithaca.edu · http://leibensperger.github.io/ · 607-274-5722 (office)

Education

Ph.D. Harvard University, School of Engineering and Applied Sciences, Applied Physics Thesis: Interaction of Air Quality and Climate: Consequences of US Emissions Controls Advisor: Daniel J. Jacob

S.M. Harvard University, School of Engineering and Applied Sciences, Applied Physics

B.A. Ithaca College, Chemistry and Physics

Teaching Experience

Assistant/Associate Professor (Tenured) Ithaca College - Department of Physics & Astronomy

Fall 2022-2025 PHYS 101 - Introduction to Physics

Fall 2023 PHYS 110 - Intro. Math. and Computational Skills for Physics PHYS/ENVS 147 - Time to Act: The Science & Politics of Climate Change Spring 2021, 2023-2026, Fall 2025

Spring 2026 PHYS/ENVS 148 - Forecasting the Skies: An Introduction to Weather

Spring 2023-2026 PHYS 260 - Intermediate Physics Laboratory

Spring 2022 PHYS 280 - Learning Assistant Practicuum in Physics Fall 2020, 2021 PHYS 301/310 - Mathematical Methods of Physics

Fall 2020, 2022, 2024 PHYS 305/323 - Electromagnetism Spring 2021 PHYS 360 - Advanced Physics Laboratory

Spring 2022 PHYS 470 - Selected Topics in Advanced Physics (Fluid Mechanics)

PHYS 498 - Senior Thesis II Spring 2022 Fall 2021 PHYS 497 - Senior Thesis I

Fall 2020-Fall 2025 28 Independent Student Research Projects

Summer Summer Scholar Research Students

(2021 - 2; 2022 - 1; 2023 - 2; 2024 - 2; 2025 - 2)

Assistant/Associate Professor (Tenured) SUNY Plattsburgh - Center for Earth and Environmental Science

HON 176 - Honors Seminar: War on Science (Gen. Ed.) Spring 2019

Fall 2016-2019; Spring 2018 ENV 206 - Environmental Technology

Fall 2014-2019 GEL 391 - Physical Oceanography and Limnology

Spring 2014, 2016-2018, 2020 ENV 366 - Global Climate Change (Gen. Ed.) Spring 2013, 2015, 2017, 2019 ENV/GEL 406 - Climate Change Science ENV/GEL 306 - Atmospheric Processes Fall 2012-2019; Spring 2013-2020 Fall 2012-2015; Spring 2013-2016 ENV 340 - Environmental Science Seminar

Fall 2012, 2013

GEL 291 - Oceanography

Fall 2012-Spring 2020 Research Mentor to a total of 31 Undergraduate Students

Module Co-author

Carleton College Science Education Resource Center (SERC) 2014-2017

Interdisciplinary Teaching about Earth for a Sustainable Future (InTeGrate) module "Regulating Carbon Emissions to Mitigate Climate Change" with Pinar Batur (Vassar), Robyn Smyth (Bard), Curt Gervich (SUNY Plattsburgh), Gautam Sethi (Bard), Sandra Penny (Bard)

Teaching Fellow/Research Mentor

Harvard University

Fall 2008 EPS 208 - Physics of Climate Spring 2008; 2009

ES 6 - Environmental Science and Technology (Head TF) Summer Research Experience for Undergraduates (REU) Summer 2007; 2008

Fall 2007 EPS 133 - Intro. to Atmospheric Chemistry

Other Positions Held

Independent Consultant for Harvard University

Model Development School of Engineering and Applied Science Summer 2015 - Fall 2016

Postdoctoral Associate Massachusetts Institute of Technology

Spring 2011 - Fall 2012 Department of Earth, Atmospheric and Planetary Science

Advisor: R. Alan Plumb (Stratospheric transport and dynamics)

Graduate Research Assistant Harvard University

Fall 2005 - Spring 2011 School of Engineering and Applied Science

Advisor: Daniel J. Jacob (Atmospheric chemistry and climate)

Research Assistant Ithaca College

Summer 2005 Department of Physics

Advisor: Beth Clark (Photometric modeling of asteroid Eros 443)

Dana Intern/Undergraduate Ithaca College

Researcher Department of Physics

Summer 2004 Advisor: Luke Keller (Composition of protostellar debris disks)

Lewis' Education and NASA Glenn Research Center Research Collaborative Intern Advisor: Michael A. Meador

Summer 2003 Research Topic: Synthesis of polyacenes through photoenolization

Ithaca College School of Humanities and Sciences Dean's Merit Award

Honors and Awards

2023	triaca College School of Humanities and Sciences Dean's Ment Award
2024	Ithaca College Faculty Excellence Award for Scholarship and Creative Work
2022	Sigma Xi, Full Member of Scientific Research Society
2019	SUNY Chancellor's Award for Scholarship and Creative Activities
2018	Featured Scholar, SUNY Plattsburgh Celebration of Scholarship
2008 - 2011	US EPA Science to Achieve Results (EPA-STAR), Graduate Fellowship
2008	Harvard University Certificate of Distinction in Teaching
2005	Sigma Xi, Associate Member of Scientific Research Society
2004	Dana Internship Award at Ithaca College
2004	Sigma Pi Sigma, Physics Honor Society
2002	Ithaca College First Year Award in Mathematics
2001 - 2005	Grimley Trust Scholarship
2001 - 2005	Ithaca College Dean's Scholarship

Funding | \$954,322 in external funds total (Ithaca College/SUNY Plattsburgh portions)

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2024 - 2025	New York State Energy Research and Development Authority "Modification to Long-Term Monitoring of Methane within New York State Phase III: Harmonizing in-situ and satellite observations to constrain the methane source" Principal Investigator with Lee Murray (Rochester) - \$15,600 awarded to Ithaca College
2023 - 2026	Great Lakes Fisheries Commission "Deep lake limnology in Lake Champlain: The role of climate change and storm events" Principal Investigator with Tim Mihuc (SUNY Plattsburgh) - \$29,675 awarded to Ithaca College
2023 - 2024	New York State Energy Research and Development Authority "Modification #2 to Observations in Support of Methane Source Characterization within New York State" Principal Investigator - \$38,865 awarded to Ithaca College
2022 - 2025	New York State Department of Agriculture and Markets "Methane and nitrous oxide measurement on NYS dairy farms and manure systms" Principal Investigator with Lauren Ray (Cornell) - \$190,498 awarded to Ithaca College
2022 - 2025	New York State Energy Research and Development Authority "Long-Term Monitoring of Methane within New York State Phase III: Harmonizing in-situ and satellite observations to constrain the methane source" Principal Investigator with Lee Murray (Rochester) - \$31,226 awarded to Ithaca College
2022 - 2023	New York State Energy Research and Development Authority "Modification to Observations in Support of Methane Source Characterization within New York State" Principal Investigator - \$48,182 awarded to Ithaca College
2021 - 2023	New York State Energy Research and Development Authority "Mobile Laboratory Measurements of Methane, Ethane, and Co pollutants from Landfills, Oil and Gas Systems and Other Sources in New York State" Principal Investigator with James Schwab (Albany), Lee Murray (Rochester) and Roisin Commane (Columbia) - \$87,978 awarded to Ithaca College
2020 - 2021	New York State Energy Research and Development Authority "Observations in Support of Methane Source Characterization within New York State" Principal Investigator - \$49,913 awarded to Ithaca College
2019 - 2021	New York State Energy Research and Development Authority "Long-Term Monitoring of Methane within New York State Phase II: Assessing Trends in Sources and Characterizing Hot Spots" Principal Investigator with Lee Murray (Rochester) and Roisin Commane (Columbia) - \$40,585 awarded to Ithaca College/SUNY Plattsburgh
2019 - 2020	National Oceanic and Atmospheric Administration Lake Champlain Sea Grant "Upwelling in South Main Lake - Identifying Events and Assessing Impacts" Principal Investigator with Tom Manley (Middlebury College) - \$144,406 awarded to SUNY Plattsburgh

2017 - 2019	National Science Foundation "Collaborative Research: Common Problem Pedagogy (CP²)" Co-Investigator with Dr. James Liszka (SUNY Plattsburgh), Bruce Mattingly and Steven Broyles (SUNY Cortland), Jan Bowers and Joshua Nollenberg (SUNY Oneonta), and Lorrie Clemo and Fehmi Damkaci (SUNY Oswego) - \$81,414 awarded to SUNY Plattsburgh
2016 - 2019	New York State Energy Research and Development Authority "Long-term Monitoring of Methane within New York State: Assessing the Impact of Shifting Energy Portfolios on Regional Air Quality and Climate" Principal Investigator with Lee Murray (Rochester) - \$101,213 awarded to SUNY Plattsburgh
Summer 2016	Lake Champlain Research Consortium "Monitoring Lake Champlain to Assess Future Climate Change Impacts" with undergraduate Will Pierce - \$5,000 awarded to SUNY Plattsburgh
2016 - 2018	National Oceanic and Atmospheric Administration Lake Champlain Sea Grant "Monitoring Lake Champlain to Assess Future Climate Change Impacts" Principal Investigator - \$66,767 awarded to SUNY Plattsburgh
2015 - 2016	Interdisciplinary Teaching about Earth for a Sustainable [InTeGrate through the Science Education Resource Center at Carleton College] "Geoscience to policy: Regulating carbon emissions to mitigate climate change" Co-Principal Investigator with Curt Gervich (CEES), Sandra Penny (Sage), Robyn Smyth and Gautam Sethi (Bard), and Pinar Batur (Vassar) - \$15,000
2014	SUNY Research Foundation STEM Undergraduate Research Program Presidential Research Award - \$5,000
2013 - 2014	SUNY Research Foundation 4E Network of Excellence "Adirondack Air Chemistry and Climate: Developing a Collaborative Partnership" Principal Investigator with James Schwab (Albany) and Huiting Mao (SUNY ESF) - \$3,000

Peer-Reviewed Publications (students are italicized)

Catena, A. M., M. L. Smith, L. T. Murray, **E. M. Leibensperger**, J. Zhang, M. J. Schwab, and J. J. Schwab (2025) "Aerial estimates of methane and carbon dioxide emission rates using a mass balance approach in New York State" *Earth Syst. Sci.*, 17, 4555-4568, doi: 10.5194/essd-17-4555-2025

- Loman, M L., L. T. Murray, **E. M. Leibensperger**, and J. D. Maasakkers (2025) "A high-resolution inventory of anthropogenic methane emissions in New York State" *Environ. Sci. Technol.* 59 (32), doi: 10.1021/acs.est.5c7245
- Carrea, L., C. J. Merchant, R. I. Woolway, J..-F. Creatux, T.M. Dokulil, H. Dugan, A. Laas, **E. Leibensperger**, S.-I. Matsuzaki, D. Pierson, O.O. Rusanovskaya, S.V. Shimaraeva, E.A. Silow, M. Schmid, M.A. Timofeyev, and P. Verburg (2025) "Lake Surface Water Temperature" in State of the Climate 2024, *Bull. Amer. Meteor. Soc.*, 106 (8), doi: 10.1175/BAMS-D-25-0102.1
- Murray, L. T., **E. M. Leibensperger**, L. J. Mickley, and A. P. K. Tai (2024) "Estimating future climate change impacts on human mortality and crop yields via air pollution" *Proc. Natl. Acad. Sci USA*, 121 (39), doi: 10.1073/pnas.240011721

- Carrea, L., C. J. Merchant, R. I. Woolway, J..-F. Creatux, T.M. Dokulil, H. Dugan, A. Laas, **E. Leibensperger**, S.-I. Matsuzaki, L. J. Merio, D. Pierson, O.O. Rusanovskaya, S.V. Shimaraeva, E.A. Silow, M. Schmid, M.A. Timofeyev, and P. Verburg (2024) "Lake Surface Water Temperature" in State of the Climate 2023, *Bull. Amer. Meteor. Soc.*, 105 (8), doi: 10.1175/2024BAMSStateoftheClimate.1
- Weil, M., J. Cooney, M. Hossain, M. Konieczny, and E. M. Leibensperger (2023) "Contributing to a Greener NY: Analysis of Methane Emissions in NYS" J. Undergrad. Rep. Phys., 33, 100007, doi: 10.1063/10.0022471
- Carrea, L., C. J. Merchant, J.-F. Creatux, C. DeGasperi, T.M. Dokulil, H. Dugan, B. Gibbes, A. Laas, E. M. Leibensperger, S. Maberly, L. May, S.-I. Matsuzaki, G. Monet, D. Pierson, M. Pulkkanen, O.O. Rusanovskaya, S.V. Shimaraeva, E.A. Silow, M. Schmid, M.A. Timofeyev, P. Verburg, R.I. Woolway (2023) "Lake Surface Water Temperature" in State of the Climate 2022, *Bull. Amer. Meteor. Soc.*, 104 (9). doi: 10.1175/BAMS-23-0090.1
- **Leibensperger, E. M.**, *M. Konieczny*, and *M. Weil* (2023) "Uncertainty in the Mobile Observation of Wind" *Atmosphere*, 14, 765, doi: 10.3390/atmos14050765
- Catena, A. M., J. Zhang, R. Commane, L. T. Murray, M. J. Schwab, **E. M. Leibensperger**, J. M. Marto, M. L. Smith, and J. J. Schwab (2022) "Hydrogen sulfide emission properties from two large landfills in New York State" *Atmosphere*, 13, 1251, doi: 10.14434/josotl.v22i2.31645
- Liszka, J., R. Card, P. Clark, K. J. Coleman, **E. Leibensperger**, B. Mattingly, M. McGuire, J. Nollenberg, K. Vanslyke-Briggs, and L. Wilson (2022) "The Common Problems Project: An interdisciplinary, community-engaged, problem-based pedagogy" *Journal of the Scholarship of Teaching and Learning*, 22, 2, 96-118, doi: 10.14434/josotl.v22i2.31645
- Murray, L. T., **E. M. Leibensperger**, C. Orbe, L. J. Mickley, and M. Sulprizo (2021) "GCAP 2.0: A global 3-D chemical transport model framework for past, present, and future climate scenarios" *Geosci. Model Dev.*, 14, 5789-5823, doi: 10.5194/gmd-14-5789-2021
- Zhang, H., S. Wu, and **E. M. Leibensperger** (2021) "Source-receptor relationships for atmospheric mercury deposition in the context of global change" *Atmos. Env.*, 254, doi: 10.1016/j.atmosenv.2021.118349
- Penny, S. M., R. Smyth, G. Sethi, **E. M. Leibensperger**, C. Gervich, and P. Batur (2019) "Multidisciplinary and Topical in the Science Classroom: Regulating Carbon Emissions to Mitigate Climate Change" in *Interdisciplinary Teaching About Earth and the Environment for a Sustainable Future*, Goesselin, D. C., A. E. Egger, and J. Taber (Eds.), Springer
- Mao, J., A. Carlton, R. C. Cohen, W. H. Brune, J. L. Jimenez, H. O. T. Pye, N. L. Ng, B. McDonald, C. Warneke, J. de Gouw, L. J. Mickley, **E. M. Leibensperger**, R. Mathur, and L. Horowtiz (2018) "Southeast Atmosphere Studies: Learning from model-observation syntheses" *Atmos. Chem. Phys.*, 18, 2615-2651, doi:10.5194/acp-18-2615-2018
- Shen, L., L. J. Mickley, and **E. M. Leibensperger** (2017) "Atlantic Multidecadal Oscillation drives multidecadal variablility of summertime surface air quality in the eastern United States" *Geophys. Res. Lett.*, 44, doi:10.1002/2017GL075905.
- Cusworth, D. H., L. J. Mickley, **E. M. Leibensperger**, and M. J. Iacono (2017) "Aerosols as a driver of enhanced U.S. surface solar radiation since the early 21st century and resulting hydrological impacts" *Atmos. Chem. Phys.*, 17, 13559-13572, doi:10.5194/acp-17-13559-2017

- Fiore, A. M., V. Naik, and **E. M. Leibensperger** (2015) "A Summary of the 45th A&WMA Critical Review: Air Quality and Climate Connections" *EM Magazine*, June, 32-35.
- Fiore, A. M., V. Naik, and **E. M. Leibensperger** (2015) "Critical Review: Air quality and connections" *J. Air Waste Manage.*, 65(6), 646-685
- Oswald, E., L.-A. Dupigny Giroux, **E. M. Leibensperger**, R. Poirot, and J. Merrell (2015) "Climate controls on air quality in the Northeastern U.S.: An examination of summertime ozone statistics during 1993-2012" *Atmos. Environ.*, 112, 278-288
- **Leibensperger, E. M.** and R. A. Plumb (2014) "Effective diffusivity in baroclinic flow" *J. Atmos. Sci.*, 71(3), 972-984
- Barrett, S. R. H., S. H. L. Yim, C. K. Gilmore, L. T. Murray, S. R. Kuhn, A. P. K. Tai, R. M. Yantosca, D. W. Byun, F. Ngan, X. Li, J. Levy, A. Ashok, J. Koo, H. M. Wong, O. Dessens, S. Balasubramanian, G. G. Fleming, C. Wollersheim, R. Malina, M. N. Pearlson, S. Arunachalam, F. S. Binkowski, **E. M. Leibensperger**, D. J. Jacob, J. I. Hileman, and I. A. Waitz (2012) "Public health, climate and economic impacts of desulfurizing jet fuel" *Environ. Sci. Technol.*, 26, 4275-4282
- **Leibensperger, E. M.**, L. J. Mickley, D. J. Jacob, W.-T. Chen, J. H. Seinfeld, A. Nenes, P. J. Adams, D. G. Streets, N. Kumar, and D. Rind (2012) "Climatic effects of 1950-2050 changes in US anthropogenic aerosols Part 2: Climate response" *Atmos. Chem. Phys.*, 12, 3349-3362
- **Leibensperger, E. M.**, L. J. Mickley, D. J. Jacob, W.-T. Chen, J. H. Seinfeld, A. Nenes, P. J. Adams, D. G. Streets, N. Kumar, and D. Rind (2012) "Climatic effects of 1950-2050 changes in US anthropogenic aerosols Part 1: Aerosol trends and radiative forcing" *Atmos. Chem. Phys.*, 12, 3333-3348
- Tai, A. P. K., L. J. Mickley, D. J. Jacob, **E. M. Leibensperger**, L. Zhang, J. A. Fisher, and H.O.T. Pye (2012) "Meteorological modes of variability for fine particulate matter (PM_{2,5}) air quality in the United States: Implications for PM_{2,5} sensitivity to climate change" *Atmos. Chem. Phys.*, 12, 3131-3145
- Mickley, L. J., **E. M. Leibensperger**, D. J. Jacob, and D. Rind (2012) "Removal of aerosol optical depths over the United States causes large regional warming in a transient 2010-2050 climate simulation" *Atmos. Environ.*, 46, 545-553
- Wang, Q., D. J. Jacob, J. A. Fisher, J. Mao, **E. M. Leibensperger**, C. C. Carouge, P. Le Sager, Y. Kondo, J. L. Jimenez, M. J. Cubison, and S. J. Doherty (2011) "Sources of carbonaceous aerosols and deposited black carbon in the Arctic in winter-spring: Implications for radiative forcing" *Atmos. Chem. Phys.*, 11, 12453-12473
- Fisher, J. A., D. J. Jacob, Q. Wang, R. Bahreini, C. C. Carouge, M. J. Cubison, J. E. Dibb, T. Diehl, J. L. Jimenez, **E. M. Leibensperger**, M. B. J. Meinders, H. O. T. Pye, P. K. Quinn, S. Sharma, A. van Donkelaar, and R. M. Yantosca (2011) "Sources, distribution, and acidity of sulfate-ammonium aerosol in the Arctic in winter-spring" *Atmos. Environ.*, 45, 7301-7318
- Murphy, D. M., J. C. Chow, **E. M. Leibensperger**, W. C. Malm, C. McDade, M. Pitchford, B. A. Schichtel, J. G. Watson, W. H. White (2011) "Decreases in elemental carbon and fine particle mass in the United States" *Atmos. Chem. Phys.*, 11, 4679-4686
- **Leibensperger, E. M.**, L. J. Mickley, D. J. Jacob, and S. R. H. Barrett (2011) "Intercontinental influence of NO_x and CO emissions on particulate matter air quality" *Atmos. Environ.*, 45, 3318-3324

- Kopacz, M., D. L. Mauzerall, J. Wang, **E. M. Leibensperger**, D. K. Henze, and K. Singh (2011) "Origin and radiative forcing of black carbon transported to the Himalayas and Tibetan Plateau" *Atmos. Chem. Phys.*, 11, 2837-2852
- **Leibensperger, E. M.**, L. J. Mickley, and D. J. Jacob (2008) "Sensitivity of US air quality to mid-latitude cyclone frequency and implications of 1980-2006 climate change" *Atmos. Chem. Phys.*, 8, 7075-7086
- Wu, S., L. J. Mickley, **E. M. Leibensperger**, D. J. Jacob, D. Rind, D. G. Streets (2008) "Effects of 2000-2050 global change on ozone air quality in the United States" *J. Geophys. Res.*, 113, D06302, doi: 10.1029/2007JD008917
- Hudman, R. C., D. J. Jacob, S. Turquety, E. M. Leibensperger, L. T. Murray, S. Wu, A.B. Gilliland, M. Avery, T. H. Bertram, W. Brune, R. C. Cohen, J. E. Dibb, F. M. Flocke, A. Fried, J. Holloway, J. A. Neuman, R. Orville, A. Perring, X. Ren, G. W. Sachse, H. B. Singh, A. Swanson, and P. J. Wooldridge (2007) "Surface and lightning sources of nitrogen oxides over the United States: magnitudes, chemical evolution, and outflow" J. Geophys. Res., 112, D12S05, doi: 10.1029/2006JD007912
- Chen, C. H., B. A. Sargent, C. Bohac, K. H. Kim, **E. Leibensperger**, M. Jura, J. Najita, W. J. Forrest, D. M. Watson, G. C. Sloan, and L. D. Keller (2006) "Spitzer IRS Spectroscopy of IRAS-Discovered Debris Disks" *Astrophys. J. Suppl. S.*, 166, 351-377
- Sloan, G. C., L. D. Keller, W. J. Forrest, **E. Leibensperger**, B. Sargent, A. Li, J. Najita, D. M. Watson, B. R. Brandl, C. H. Chen, J. D. Green, F. Markwick-Kemper, T. L. Herter, P. D'Alessio, P. W. Morris, D. J. Barry, P. Hall, P. C. Meyers, and J. Houck (2005) "Mid-Infrared Spectra of Polycyclic Aromatic Hydrocarbon Emission in Herbig Ae/Be Stars" *Astrophys. J.*, 632, 956-963

Select Presentations

April 26, 2023 Remote	Seven Years of Data Buoy Observations of Lake Champlain Lake Champlain Sea Grant, University of Vermont
March 7, 2023 Las Vegas, NV	Contributing to a Greener NY: Analysis of methane emissions in NYS March Meeting of the American Physical Society (undergraduate Matthew Weil)
April 9, 2022 Rochester, NY	Mobile Observationns of Major Methane Sources in New York State Rochester Symposium for Physics, Astronomy, and Optics Students (undergraduate Jacob Cooney)
March 15, 2022 Chicago, IL November 17, 202 Remote	Mobile observations of methane to constrain agricultural greenhouse gas emissions March Meeting of the American Physical Society (undergraduate Muhtasim Hossain) 1Upwelling in Lake Champlain's South Main Lake: Identifying events and assessing impacts Lake Champlain Sea Grant, University of Vermont
May 5, 2020 Plattsburgh, NY	Aerosols and climate during the early 20th century CEES Student Research Symposium (undergraduate Fuji Maneesai)
April 17, 2020 Remote/Zoom	Climate change in the Lake Champlain Basin: What's already happened and where we are headed Zoom a Scientist, Lake Champlain Sea Grant Webinar Series for middle and high school students

March 7, 2020 Burlington, VT	Data buoys in Lake Champlain: Real-time observations State of the Lake Champlain Fisheries Meeting
Sept. 10, 2020 Grand Isle, VT	SUNY Plattsburgh data buoys and climate change in Lake Champlain Lake Champlain Basin Program Executive Committee
July 23, 2019 Wilmington, NY	Climate change in the Adirondacks: Observed change and emissions monitoring Falconer Lecture Series at Whiteface Mountain Field Station
May 9, 2019 Plattsburgh, NY	Climate change in the Adirondacks CEES Student Research Symposium (undergraduate Alexandria Elliot)
May 9, 2019 Plattsburgh, NY	Analysis of simulated methane concentrations at various locations in New York State CEES Student Research Symposium (undergraduate Joseph Judge)
May 9, 2019 Plattsburgh, NY	Seasonality of climate change CEES Student Research Symposium (undergraduate Fuji Maneesai)
May 9, 2019 Plattsburgh, NY	Weather and air quality in New York State: Late 2018 pollution event CEES Student Research Symposium (undergraduate Inna Slager)
May 9, 2019 Plattsburgh, NY	Covariation of air pollutants at Whiteface Mountain CEES Student Research Symposium (undergraduate Shafik Vadsirya)
Oct. 27, 2018 Silver Bay, NY	Climate change in the Adirondacks: Causes, Impacts, Projections North Country Climate Reality Conference (undergraduate Alexandria Elliott)
Jan. 8, 2018 Burlington, VT	Climate change and intraseasonal variability in Lake Champlain L. Champlain Research Conference (presented by Mark Malchoff)
Jan. 8, 2018 Burlington, VT	Development of a Lake Champlain Anglers' Temperature Database L. Champlain Research Conference (undergraduate Joseph Judge)
Nov. 11, 2018 Durham, NC	Regional climate change: Detection, attribution, prediction Duke University
May 3, 2017 Plattsburgh, NY	Observed and projected temperature change in Lake Champlain CEES Student Research Symposium (undergraduate Vasu Govani)
May 3, 2017 Plattsburgh, NY	Calculating the carbon flux within Lake Champlain CEES Student Research Symposium (undergraduate Grace DeSantis)
Dec. 13, 2016 San Francisco, CA	Assessing climate change within Lake Champlain (NY, VT, QC) American Geophysical Union Fall Meeting
May 5, 2016 Plattsburgh, NY	Climate change in Lake Champlain: Modeling future warming CEES Student Research Symposium (undergraduates Conor McCormick and Nicholas Campagna)
May 5, 2016 Plattsburgh, NY	How well can we model the Ice Storm of 1998? Assessing the accuracy of cloud microphysics schemes CEES Student Research Symposium (undergraduate student David Bubbins)

June 9, 2015 Princeton, NJ	Anthropogenic aerosols and the evolution of 20th century U.S. climate Southeast Atmosphere Studies Workshop, NOAA GFDL/Princeton University
May 7, 2015 Plattsburgh, NY	Modeling thermal structure of a small Adirondack lake CEES Student Research Symposium (graduate student Sarah Glancy)
May 7, 2015 Plattsburgh, NY	Chemical composition of Adirondack snow CEES Student Research Symposium (undergraduates Casey Corrigan and Neil Sedlak)
April 14, 2015 Montreal, QC	Does air pollution impact U.S. drought? Department of Atmospheric and Oceanic Science, McGill University
Dec 19, 2014 San Francisco, CA	Anthropogenic aerosols and the evolution of U.S. droughts American Geophysical Union Fall Meeting
Dec. 5, 2014 Palisades, NY	Does air pollution impact drought? Influence of sulfate and BC on U.S. climate Lamont-Doherty Earth Observatory, Columbia University
Sep. 26, 2014 Plattsburgh, NY	Anthropogenic aerosols and the dust bowl NYS Section of the American Physical Society (undergraduate Evan Cazavilan)
Sep. 26, 2014 Plattsburgh, NY	Speak for the trees: What can be learned from Champlain Valley tree core data New York State Section of the American Physical Society (undergraduate Ryan Revette)
March 27, 2012 Ithaca, NY	Connecting US air pollution to international air quality and climate change Department of Chemistry, Ithaca College
October 6, 2011 New York, NY	Interactions between air quality and climate SEAS Colloquium in Climate Science, Columbia University
Sep.12, 2011 Cambridge, MA	Climate effects of US anthropogenic aerosols Atmospheric Science Seminar Series, MIT
June 10, 2011 Cambridge, MA	Interactions between US air quality and climate Joint Program on the Science and Policy of Global Change, MIT
May 3, 2011 Cambridge, MA	Climate effects of US aerosol sources: aerosol trends, radiative forcing, and climate response 5th International GEOS-Chem Meeting, Harvard University
July 11, 2010 Halifax, NS	Climate response to 1950-2050 US aerosol trends ICACGP/IGAC
March 31, 2010 Princeton, NJ	Climate response to changing US aerosol sources NOAA GFDL
Feb. 12, 2010 New York, NY	Climate response to changing US aerosol sources NASA GISS
Dec. 19, 2008 San Francisco, CA	Regional climate response to US aerosol sources American Geophysical Union Fall Meeting
Feb. 21, 2007	Air quality degradation due to greenhouse warming decreasing the frequency of mid

latitude cyclones Research

Triangle Park, NC EPA Workshop on Consequences of Global Change for Air Quality

Professional Activities

Academic Peer Reviewer

Journals Atmospheric Chemistry and Physics, Atmos. Environ., Climate Dynamics, Climate

> Research, Climatic Change, Current Pollution Reports (editorial board), Environmental Research Letters, Environmental Science & Technology, Geo. Res. Lett., Hydrology, Journal of Climate, Journal of Geophysical Research - Atmosphere, Nature Geoscience,

PNAS, Scientific Reports

NASA, NOAA, NSF, U.K. Natural Environment Research Council **Grant Agencies**

Professional Memberships American Geophysical Union, American Meteorological Society (full member), American Physical Society, Sigma Xi, Clinton County Environmental Health & Safety

Professional Advisory Committee (2015-2020)

Outreach

Science Consultant Town of Dryden/Mother's Out Front Spring 2021 - present

Scientific Reviewer Raymond Johnson's climate change column in the Plattsburgh

2012 - 2020 Press Republican

Educator

2019

Teacher training event with Lake Champlain Sea Grant on R/V Melosira

Presenter

Falconer Lecture Series at Whiteface Mountain ASRC Lodge

2019

"Climate change in the Adirondacks: Observed change and emissions monitoring"

Presenter

Lake Champlain Basin Program Executive Committee,

2019 "SUNY Plattsburgh data buoys and climate change in Lake Champlain"

Panelist

2019

Mountain Lake PBS Climate Change Forum (recorded and aired)

Media Expert

2019

North Country Public Radio (NPR), Glens Falls Post Star, and Adirondack Daily

Enterprise

Presenter

North Country Climate Reality Conference

2018

"Climate change in the Adirondacks" with undergraduate student Alexandria Elliot

Presenter

Lake Champlain United Anglers meeting

2017

"Temperatures in Lake Champlain: Can climate research be of use to anglers?"

Judge 2013-2017 Champlain Valley Regional Science Fair

Presenter

Science@30City

2016

"Climate Change: What's Left to Argue?"

CEES Fridays in the Center Series Presenter

2016 "Climate Change is no April Fools' Joke"

SUNY Plattsburgh College Council Presenter

2016 "Overview of Lake Champlain Research"

Plattsburgh Rotary Club Presenter

2016 "Overview of Lake Champlain Research"

Panelist 2015

SUNY Plattsburgh Honors Center National Issues Forum on Climate Change

2015

SUNY Plattsburgh's contribution to SUNY-wide forum on extreme weather and climate Co-organizer

change (included on-campus events open to public)

Scientific Reviewer Climate Literacy and Energy Awareness Network (CLEAN)

2013 - 2016

Co-organizer

2014

SUNY Plattsburgh 50th Anniversary of the Wilderness Act Celebration

Earth and Environmental Science Club Lecture Series Presenter

"Air!" 2014

Environmental Action Committee Earth Week Presenter

2013 "Super Storms!"

Northeast States for Coordinated Air Use Management Lecturer

"Short-lived climate forcers" 2012

University Service

At Ithaca College

Member Humanities and Sciences Academic Status Appeals Committee

Spring 2022 - present

Paulen A. Smith Chapter of Sigma Xi at Ithaca College Secretary

Fall 2021 - present

Co-organizer Physics & Astronomy Colloquium Series

Fall 2021 - present

Advisor Ithaca College Men's Club Lacrosse

Fall 2020 - present

Faculty Presenter Grants 101 Workshop

Spring 2023

Organizer/Proposer Ithaca College grant submission to the Sherman Fairchild Foundation

Fall 2021 - Spring 2022

Co-developer Spring 2021

Applied Physics Minor

At SUNY Plattsburgh

Associate Lake Champlain Research Institute

Fall 2012 - Spring 2020

Chair Water Quality Faculty Search Committee

Fall 2019 - Spring 2020

Member Feinberg Library Undergraduate Research Award Committee

Fall 2015 - Spring 2020

Ph.D. Committee Ying Zhou (SUNY-ESF)

Fall 2015 - 2019

Chair Soil Science Faculty Search Committee

Fall 2017 - Spring 2019

Faculty Senator SUNY Plattsburgh

Fall 2015 - Spring 2019

Chair Water Quality Modeling, Geology, Soil Science Faculty Search Committee (3 positions)

Spring 2017

Member Aquatic and Terrestrial Ecologist Faculty Search Committee

Fall 2016 - Spring 2017

Member CEES Curriculum Committee

Fall 2012 - Spring 2017

Member Wetland/Forest Ecologist Faculty Search Committee

Spring 2016

CEES Rep. Freshman Orientation

Summer 2015; 2016

Panelist Honors Center National Issues Forum on Climate Change

Spring 2015

Presenter, Museum Docents Meeting, Wilderness Act and the Adirondack Art Walk

Spring 2015

Co-organizer SUNY-wide extreme weather and climate change forum

Fall 2014 - Spring 2015

Co-planner New York State Section of the American Physical Society Topical Meeting

Summer 2014

Co-organizer SUNY Plattsburgh 50th Anniversary of the Wilderness Act Celebration

Summer 2014

Co-developer Environmental Physical Science major

Spring - Fall 2014)

Participant SUNY Distance Mentored Undergraduate Research