Curriculum Vitae for Mark J. Potosnak, Ph.D.

Contact information

Department of Environmental Science and Studies
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Education

1996–2002	*Columbia University, New York, NY*
2002	Ph.D. in Earth & Environmental Sciences
2000	M.Phil. in Earth & Environmental Sciences
1998	M.A. in Earth & Environmental Sciences
1990–1994	*Harvard University, Cambridge, MA*
1994	Joint B.A. in Earth & Planetary Science and Physics, magna cum laude

Academic appointments

2021–present	Full Professor, Environmental Science and Studies, DePaul University
2015–2021	Associate Professor, Environmental Science and Studies, DePaul University
2008–2015	Assistant Professor, Environmental Science and Studies, DePaul University
2007–2008	Visiting Assistant Professor, Geography and Environment, Boston University
2004–2007	Assistant Research Professor, Earth and Environmental Science, Desert Research Institute
2002–2003	Post-doctoral Fellow, Advanced Study Program, National Center for Atmospheric Research

Administrative appointments

2024–present	Associate Dean for Faculty Affairs, College of Science and Health, DePaul University
2018–2023	Chair, Environmental Science and Studies, DePaul University
2005–2007	Associate Director of the graduate Atmospheric Sciences Program, University of Nevada, Reno
2004–2007	Nevada System of Higher Education Member Representative for the University Corporation for Atmospheric Research

Teaching experience

Undergraduate courses taught at DePaul

- ENV 101 Introduction to Environmental Science, for non-majors, 2008, 2009 (2x), 2011, 2013, 2017
- ENV 102 Introduction to Environmental Science with Lab, for non-majors, 2008
- ENV 200 Cities and the Environment, for majors and non-majors, 2009
- ENV 216 Earth System Science, for majors, 2009–2019 (with lab 2012–2017)
- ENV 230 Global Climate Change, for majors and non-majors, 2009, 2010 (2x), 2011, 2014, 2015, 2016, 2017 (x), 2018 (2x), 2019 (2x), 2020 (2x), 2021 (2x), 2022 (2x), 2023 (2x), 2024 (2x), 2025
- ENV 316 Chemistry of Earth Systems with Lab, for majors, 2011, 2013, 2015

- ENV 360 Research Methods, for majors, 2010, 2021
- CHE 265 Atmospheric Chemistry with Lab, for majors, 2010, 2014
- ENV 359/403 Advanced Data Analysis with R, 2020, 2022, 2023, 2024
- ENV 390 Special topics: Papal Encyclical on the Environment, 2015

Liberal Studies Program courses taught

- LSP 111 Explore Chicago: Natural History in Chicago, 2010
- LSP 112 Focal Point Seminar: Global Warming and the Media, 2014, 2015, 2016

Courses taught at other universities

- Care for the Earth: Ethics and the Environment, Catholic Theological Union, 2015
- Biogeography, undergraduate course for non-majors, 2008, Boston University
- Natural Environments: The Physical Landscape, undergraduate course for majors, 2008, Boston University
- Natural Environments: The Atmosphere, undergraduate course for majors, 2007, 2008, Boston University
- Climate and Environment, undergraduate course for majors, 2007, Boston University
- Earth and Space Science, co-taught, undergraduate course for non-majors, 2007, Santa Fe Community College
- Introduction to Astronomy, undergraduate course for non-majors, 2007, Santa Fe Community College
- Physical Principles of the Environment, graduate, 2007, Boston University
- Measuring Plant-Atmosphere Exchanges, graduate, 2006, University of Nevada, Reno
- Physical Climatology (jointly taught), graduate, 2006, University of Nevada, Reno
- Introduction to Air Pollution (jointly taught), graduate, 2006, University of Nevada, Reno
- Air Pollution and Ecosystems, graduate, 2005, University of Nevada, Reno

Graduate thesis and non-thesis students advised

- Elene Drosos, MS in Environmental Science, 2024, DePaul University
- Aarti Mistry, MS in Environmental Science, 2022, DePaul University
- Zach Wahrenburg, MS in Chemistry (non-thesis), 2012, DePaul University
- Maria Papiez, MS in Environmental Sciences and Health, 2006, University of Nevada, Reno

Graduate thesis defense committees, invited to participate in person as an external member

- Erica Jaakkola, PhD, University of Lund, Sweden, March 2024
- Anni Vanhatalo, PhD, University of Helsinki, Finland, May 2018
- Hanna Valolahti, PhD, University of Copenhagen, Denmark, Nov 2015

Undergraduate students with supervised research at DePaul University

- Beau Rass, ENV BS thesis student, in progress
- Iris Keller, ENV BS thesis student, 2025
- Jacob Johnson, ENV BS thesis student, 2024
- Kate Petralia, ENV BS thesis student, 2023

- Gavin Salas, ENV BS thesis student, 2023
- Janet Nunez, ENV BS thesis student, 2022
- Tom Sykora, ENV BS thesis student, 2021
- Lena Dibenedetto, ENV BS thesis student, 2021
- Adam Steffeck, ENV BS thesis student, 2021
- Francis Kane, ENV BA research student, 2018
- Joseph Abbate, ENV BS thesis student, 2017
- Aarti Mistry, ENV BS thesis student, 2017
- Mike Cole, ENV BS thesis student, 2016
- Cody Sabo, ENV BS thesis student, 2016
- Angie Bouche, ENV BS thesis and Honors student, 2015
- Mary Babiez, ENV BA summer internship adviser at the Morton Arboretum, 2015
- Olivia Johnson, ENV BS undergraduate research assistant, 2014
- Elizabeth (Liz) Carter, ENV BS summer internship adviser at the Morton Arboretum, 2014
- Monica Pocs, ENV BS thesis and Honors student, 2014
- Othon Nunez-Montelongo, ENV BS thesis, 2014
- Shelby Mongan, Religious Studies, 2nd reader for Honors thesis, 2013
- Lauren Lestourgeon, ENV BS thesis, 2012
- Agnes Kalat (co-advised), ENV BS thesis, 2012
- Kathleen Roberts, ENV BS thesis, 2011
- Amelia Menton, ENV minor research project, 2011
- Marian Vernon, ENV BA research project, 2010, 2011
- Caitlin Schulze, ENV BS thesis, 2010
- Christine Whitacre, ENV BS thesis 2010

Grants and contracts

External

- Received funding for "HDR DSC: Collaborative Research: The Metropolitan Chicago Data Science Corps (MCDC): Learning from Data to Support Communities" from NSF, $163,671, three years + one-year no-cost extension. Lead proposal was Northwestern University; MJP was PI on DePaul collaborative proposal, with a Sep 1 **2021** start date.

- Received funding for "2022 Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere: Bridging Ecology, Chemistry and Climate" submitted to the National Science Foundation, Jun **2022**, $30,130, one year. MJP was PI.

- Received funding for "2022 Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere: Bridging Ecology, Chemistry and Climate" submitted to the National Oceanographic and Atmospheric Administration, Jun **2022**, $12,7700, one year. MJP was PI.

- Received funding for "VOC emissions from prescribed burns at Airforce Installations in the Southeastern USA" submitted to Argonne National Lab, Mar **2021**, $63,491, one year with an additional two-year, no-cost extension. Argonne received funding from the US Air Force; MJP has a contract with Argonne.

- Received funding for two contracts "CO2/SO2 sensor package development for a UAV platform to measure diesel ship emissions" submitted to NSF, as a subcontract through AirView, Mar and Jun **2021**, $5,926, total.
- Submitted a proposal for "HDR DSC: Collaborative Research: The Metropolitan Chicago Data Science Corps (MCDC): Learning from Data to Support Communities" to NSF, Feb **2019**, $133,805, three years. Lead proposal was Northwestern University; MJP was PI on DePaul collaborative proposal. The proposal was declined.
- Submitted a sub-award proposal for "Mid-scale RI-1 (M1:IP):SAGE: A Software-Defined Sensor Network" to NSF, Feb **2019**, $160,00, three years. Lead proposal was Northwestern University. MJP was a co-PI and lead for the sub-award. The proposal was partially funded, but not at a level that will fund DePaul's sub-award.
- Received funding for "Embedded Sensing and Data Analytics via Edge Computing" submitted to ComEd. MJP was lead at DePaul on a subcontract from Argonne National Laboratory, Jan **2019**, $19,819, one year (extended via a no-cost extension to two years). Provided summary salary (2019, 2020).
- Received funding for "*Laudato si*' weekend retreat" submitted to Catholic Relief Services/Association of Catholic Colleges and Universities, Jan **2019**, $1,464, for five months. MJP was the PI.
- Received funding for "MRI: Development of an Urban-Scale Instrument for Interdisciplinary Research" submitted to the National Science Foundation, via a subcontract from the University of Chicago, Feb **2018**, $15,309, two years. Charlie Catlett was the PI, and MJP was the lead for the DePaul subcontract. Provided summer salary (2018, 2019).
- Received funding for "2018 Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere: Connecting Volatiles and the Climate System from Leaf to Planet" submitted to the National Science Foundation, Jun **2018**, $28,540. MJP was PI.
- Received funding for "2018 Biogenic Hydrocarbons and the Atmosphere GRC" submitted to NASA, May **2018**, $18,000. MJP was co-PI and Nancy Gray of GRC was PI.
- Received funding for "GRC Biogenic Hydrocarbons and the Atmosphere: Diversity of Sources, Sinks, and Impacts of Atmospheric Organics" submitted to NOAA, May **2018**, $8,000. MJP was PI.
- Submitted a proposal for "HAB APEX: High-Altitude Balloon Air Pollution Experiment" to NASA Citizen Science, Jul **2016**, $996,022, three years, MJP was the Principal Investigator. The proposal was declined.
- Received funding for "A New Quadrotor-Based STEM Course" submitted to Illinois Space Grant Consortium, Apr **2015**, $12,240.28, one year, MJP was co-Principal Investigator.
- Collaborator for "Collaborative Research: Improving Undergraduate STEM Education through High Altitude Ballooning: Broad Implementation of Evidence-Based Pedagogy" to the National Science Foundation, Jan **2015**, two months of summer salary support. The proposal was declined.

- Provided a letter of support for "MRI: Development of an Urban-Scale Instrument for Interdisciplinary Research" submitted to the National Science Foundation, Jan **2015**. The proposal was funded, and later DePaul received a subcontract (see above).
- Resubmitted a proposal for "Collaborative Research: Arthropod herbivory effects on arctic willow under current and future climate change scenarios" to the Arctic Natural Sciences of the National Science Foundation, Oct **2014**, $118,769, three years, Principle Investigator of a collaborative proposal. The proposal was declined.
- Received funding for "A high-altitude balloon platform for exploring landscape-scale carbon dioxide emissions" from the Illinois Space Grant Consortium/National Aeronautics and Space Agency, May 15 2013 to May 16 **2014**, $8,244, sub-award Principal Investigator.
- Resubmitted a proposal for "Collaborative Research: Arthropod herbivory effects on arctic willow under current and future climate change scenarios" to the Arctic Natural Sciences of the National Science Foundation, Dec **2013**, $115,328, three years, Principal Investigator of a collaborative proposal. The proposal was declined.
- Submitted a proposal for "Collaborative Research: Arthropod herbivory effects on arctic willow under current and future climate change scenarios" to the Arctic Natural Sciences of the National Science Foundation, Oct **2012**, $ 230,209, five years, Principal Investigator of a collaborative proposal. The proposal was declined.
- Received funding for "A tethered balloon system for measuring CO_2 profiles in urban environments" from the Illinois Space Grant Consortium/National Aeronautics and Space Agency, May 15 2012 to May 16 **2013**, $9,998, sub-award Principal Investigator.
- Received funding for "Biogenic Volatile Organic Compound Emissions from the Tundra and Arctic Atmospheric Chemistry" from the Atmospheric Chemistry Division of the National Science Foundation, May 1 2010 to Apr 30 **2012** (no-cost extension to Apr 2013), $54,684.00, Principal Investigator on a collaborative project; DePaul was the lead institution. Provided summer salary (2010, 2011).
- Resubmitted a proposal for "Collaborative Research: Impact of Sesquiterpenes on Regional Air Quality" to the Atmospheric Chemistry Division of the National Science Foundation, July **2011**, $48,383, three years, Principal Investigator of a collaborative proposal. The proposal was declined.
- Submitted a letter of intent for "Leaf-level exploration of biosphere-atmosphere interactions in the field employing proton-transfer-reaction mass spectrometry" to the Beckman Young Investigation Award, September **2011**. The letter was not selected for a full proposal in Dec 2011.
- Received funding for "Exploring urban CO_2 concentrations for global climate change education and research" from the Illinois Space Grant Consortium/National Aeronautics and Space Agency, May 15 2010 to May 16 **2011**, $9,984, sub-award Principal Investigator.
- Collaborated with the Chicago Academy of Sciences' Peggy Notebaert Nature Museum staff for submitting a grant, "Student and Teacher Resources for Investigation of Climate Change (STRICC)," for Global Climate Change Education to the National Aeronautics and Space Administration, April **2010**, $10,699 (DePaul sub-award portion), three years, collaborator. This proposal was declined.

Internal

- Received funding for "Building Sustainability Across the Curriculum" from the Quality of Instruction Council Collaboration effort, **2023-2024**, $10,500, co-Principal Investigator.
- Received funding for "Building Sustainability into the DePaul Curriculum: A Workshop for Faculty" from the Vincentian Endowment Fund, **2023**, $5,500, co-Principal Investigator.
- Received funding for "Laudato si' weekend retreat for students, staff and faculty from Catholic universities" from the Vincentian Endowment Fund, **2018**, $3000.
- Received funding for "Developing best practices to support outstanding course proposals for Science as a Way of Knowing" from the Quality of Instruction Council, **2016**, $3500, Principal Investigator.
- Received funding for "Developing a New Interdisciplinary Minor: Climate Change Science and Policy" from the Quality of Instruction Council Collaboration effort, **2015-2016**, $3000, co-Principal Investigator.
- Received funding for "Genetic controls on isoprene emission from oaks using the Morton Arboretum oak collection" from the University Research Committee, summer **2015**, $3,489, Principal Investigator.
- Received funding for "Effects of global change on plant-atmosphere interactions" from the College of Science and Health Summer Research Grant, summer **2012**, $4,200 (summer salary), Principal Investigator.
- Received funding for "Effects of global change on plant-atmosphere interactions" from the University Research Committee, Jun 1 2012 to Dec 1 **2013**, $3,190, Principal Investigator.
- University Research Council (URC) Research Leave, DePaul University, SQ 2012 to AQ **2012**, *Physiological controls on isoprene emissions from plants with the application of predicting responses to global climate change factors.*
- Received funding for "Impact of Urban Forests on Air Quality in Chicago" from the University Research Committee, Dec 1 2009 to Jun 1 **2011**, $3,190, Principal Investigator.
- Received funding for "Impact of Urban Forests on Air Quality in Chicago" from the College of Liberal Arts and Sciences, summer **2010**, $4,200 (summer salary), Principal Investigator.

Publications

Note: The symbol [G] denotes advised graduate student co-authors and [U] denotes DePaul undergraduate student co-authors.

Refereed journal articles, peer blind reviewed

Petralia [U], K., M. Potosnak. **2024**. Particulate Matter Emissions from Prescribed Burns in the Chicagoland Area. *Fire*, 7(11): 379, doi:10.3390/fire7110379.

Wang, Y., N. Lin, W. Li, A. Guenther, J. C. Y. Lam, A. P. K. Tai, M. J. Potosnak and R. Seco. **2022**. Satellite-derived constraints on the effect of drought stress on biogenic isoprene emissions in the southeastern US. *Atmospheric Chemistry and Physics*. 22(21): 14189-14208.

Opacka, Beata, Jean-François Müller, Trissevgeni Stavrakou, Diego G. Miralles, Akash Koppa, Brianna Rita Pagán, Mark J. Potosnak, Roger Seco, Isabelle De Smedt, Alex B. Guenther. **2022**. Impact of drought on isoprene fluxes assessed using field data, satellite-based GLEAM soil moisture and HCHO observations from OMI. *Remote Sensing*, 14(9), doi: 10.3390/rs14092021.

Lei, Yadong; Yue, Xu; Liao, Hong; Zhang, Lin; Zhou, Hao; Tian, Chenguang; Gong, Cheng; Ma, Yimian; Cao, Yang; Seco, Roger; Karl, Thomas; Potosnak, Mark. **2022**. A global perspective of drought impacts on ozone pollution episodes. *Environmental Science & Technology*, doi: 10.1021/acs.est.1c07260.

Frances Kane [U], Joseph Abbate [U], Eric C. Landahl and Mark J. Potosnak. **2022**. The Mobile Monitoring of Particulate Matter through Wearable Sensors and Their Influence on Students' Environmental Attitudes. *Sensors*, 22(3): 1295, doi: 10.3390/s22031295.

Mistry [G], Aarti, Adam Steffeck [U] and Mark Potosnak. **2021**. Edge Growth Form of European Buckthorn Increases Isoprene Emissions From Urban Forests. *Frontiers in Forests and Global Change: Forests and the Atmosphere* 3(149): doi: 10.3389/ffgc.2020.601678.

Potosnak, M.J., A. Mistry[G], B. Beck-Winchatz, P. Ritter. **2021**. Tropospheric sounding with low-cost particulate matter sensors. *Journal of High-Altitude Ballooning* 1:1, doi: 10.31274/jhab.13030.

Sarkar, C., A. Turnipseed, S. Shertz, T. Karl, M. Potosnak, J. Bai, D. Serça, D. Bonal, B. Burban, P. R. C. Lopes, O. Vega and A. B. Guenther **2020**. A portable, low-cost relaxed eddy accumulation (REA) system for quantifying ecosystem-level fluxes of volatile organics. *Atmospheric Environment* 117764.

Filella, I., C. Zhang, R. Seco, M. Potosnak, A. Guenther, T. Karl, J. Gamon, S. Pallardy, L. Gu, S. Kim, M. Balzarolo, M. Fernandez-Martinez and J. Penuelas **2018**. A MODIS Photochemical Reflectance Index (PRI) as an Estimator of Isoprene Emissions in a Temperate Deciduous Forest. *Remote Sensing* 10(4): 557.

Jiang, X., A. Guenther, M. Potosnak, C. Geron, R. Seco, T. Karl, S. Kim, L. Gu and S. Pallardy. **2018**. "Isoprene emission response to drought and the impact on global atmospheric chemistry." *Atmospheric Environment*, 183: 69-83.

Zheng, Y., N. Unger, J. M. Tadić, R. Seco, A. B. Guenther, M. P. Barkley, M. J. Potosnak, L. T. Murray, A. M. Michalak, X. Qiu, S. Kim, T. Karl, L. Gu and S. G. Pallardy. **2017**. Drought impacts on photosynthesis, isoprene emission and atmospheric formaldehyde in a mid-latitude forest. *Atmospheric Environment* 167: 190-201.

Bouche [U], A., Beck-Winchatz, B., Potosnak, M.J., **2016**. A high-altitude balloon platform for determining exchange of carbon dioxide over agricultural landscapes. *Atmospheric Measurement Technology*, 9: 5707-5719.

Kravitz, B., Guenther, A.B., Gu, L., Karl, T., Kaser, L., Pallardy, S.G., Peñuelas, J., Potosnak, M.J., Seco, R., **2016**. A new paradigm of quantifying ecosystem stress through chemical signatures. *Ecosphere*, 7: e01559.

Conry, P., A. Sharma, M.J. Potosnak, L.S. Leo, E. Bensman, J.J. Hellmann and H.J.S. Fernando. **2015**. Chicago's Heat Island and Climate Change: Bridging the Scales via Dynamical Downscaling. *Journal of Applied Meteorology and Climatology*, 54: 1430–1448. [Note: not included as part of my tenure and promotion materials.]

Potosnak, M.J., L. Lestrougeon[U] and O. Nunez[U]. **2014**. Increasing leaf temperature reduces the suppression of isoprene emission by elevated CO_2 concentration. *Science of the Total Environment*, 481: 352–359.

Potosnak, M.J., L. LeStourgeon[U], S.G. Pallardy, K.P. Hosman, L. Gu, T. Karl, C. Geron and A.B. Guenther. **2014**. Observed and modeled ecosystem isoprene fluxes from an oak-dominated temperate forest and the influence of drought stress. *Atmospheric Environment*, 84: 314–322.

Potosnak, M.J., B.M. Baker, L. LeStourgeon[U], S.M. Disher, K.L. Griffin, M.S. Bret-Harte and G. Starr. **2013**. Isoprene emissions from a tundra ecosystem. *Biogeosciences*, 10: 871–889.

Unger N., K. Harper, Y. Zheng, N.Y. Kiang, I. Aleinov, A. Arneth, G. Schurgers, C. Amelynck, A. Goldstein, A. Guenther, B. Heinesch, C.N. Hewitt, T. Karl, Q. Laffineur, B. Langford, K. A. McKinney, P. Misztal, M. Potosnak, J. Rinne, S. Pressley, N. Schoon and D. Serça. **2013**. Photosynthesis-dependent isoprene emission from leaf to planet in a global carbon-chemistry-climate model. *Atmospheric Chemistry and Physics,* 13: 10243–10269.

Pacifico, F., S. P. Harrison, C. D. Jones, A. Arneth, S. Sitch, G. P. Weedon, M. P. Barkley, P. I. Palmer, D. Serça, M. Potosnak, T.-M. Fu, A. Goldstein, J. Bai and G. Schurgers. **2011**. Evaluation of a photosynthesis-based biogenic isoprene emission scheme in JULES and simulation of isoprene emissions under present-day climate conditions. *Atmospheric Chemistry and Physics*, 11: 4371–4389.

Rastetter, E.B., M. Williams, K.L. Griffin, B.L. Kwiatkowski, G.Tomasky, M.J. Potosnak, P.C. Stoy, G.R. Shaver, M. Stieglitz, J.E. Hobbie and G.W. Kling. **2010**. Processing arctic eddy-flux data using a simple carbon-exchange model embedded in the ensemble Kalman filter. *Ecological Applications*, 20 (5): 1285–1301.

Papiez[G], M.R., M.J. Potosnak, W.S. Goliff, A.B. Guenter, S.N. Matsunaga and W.R. Stockell. **2009**. The impacts of reactive terpene emissions from plants on air quality in Las Vegas, Nevada. *Atmospheric Environment*, 43: 4109–4123.

Matsunaga S.N., A.B. Guenther, J.P. Greenberg, M. Potosnak, M. Papiez, T. Hiura, S. Kato, S. Nishida, P. Harley and Y. Kajii. **2009**. Leaf level emission measurement of sesquiterpenes and oxygenated sesquiterpenes from desert shrubs and temperate forest trees using a liquid extraction technique. *Geochemical Journal*, 43: 179–189.

Matsunaga, S.N., A.B. Guenther, M.J. Potosnak and E.C. Apel. **2008**. Emission of sunscreen salicylic esters from desert vegetation and their contribution to aerosol formation. *Atmospheric Chemistry and Physics*, 8: 7367–7371.

Sakulyanontvittaya, T, T. Duhl, C. Wiedinmyer, D. Helmig, S. Matsunaga, M. Potosnak, J. Milford, and A. Guenther. **2008**. Monoterpene and Sesquiterpene Emission Estimates for the United States. *Environmental Science and Technology*, 42 (5): 1623–1629.

Müller, J.-F., T. Stavrakou, S. Wallens, I. De Smedt, M. Van Roozendael, M.J. Potosnak, J. Rinne, B. Munger, A. Goldstein and A.B. Guenther. **2008**. Global isoprene emissions estimated using MEGAN, ECMWF analyses and a detailed canopy environment model. *Atmospheric Chemistry and Physics*, 8: 1329–1341.

Pegoraro, E., M.J. Potosnak, R.K. Monson, A. Rey, G. Barron-Gafford and C.B. Osmond. **2007**. The effect of elevated CO_2, soil and atmospheric water deficit and seasonal phenology on leaf and ecosystem isoprene emission. *Functional Plant Biology*, 34 (9): 774–784.

Karl, T., A. Guenther, R.J. Yokelson, J. Greenberg, M. Potosnak, D.R. Blake, and P. Artaxo. **2007**. The tropical forest and fire emissions experiment: Emission, chemistry, and transport of biogenic volatile organic compounds in the lower atmosphere over Amazonia. *Journal of Geophysical Research*, 112: Art. No. D18302.

Fuentes, J.D, D. Wang, D.R. Bowling, M. Potosnak, R.K. Monson, W.S. Goliff and W.R. Stockwell. **2007**. Biogenic hydrocarbon chemistry within and above a mixed deciduous forest. *Journal of Atmospheric Chemistry*, 56 (2): 165–185.

Stroud, C., P. Makar, T. Karl, A. Guenther, C. Geron, A. Turnipseed, E. Nemitz, B. Baker, M. Potosnak and J.D. Fuentes. **2005**. Role of Canopy-Scale Photochemistry in Modifying Biogenic-Atmosphere Exchange of Reactive Terpene Species: Results from the CELTIC Field Study. *Journal of Geophysical Research*, 110 (D17): Art. No. D17303.

Murthy, R., G. Barron-Gafford, P.M. Dougherty, V.C. Engel, K. Grieve, L. Handley, C. Klimas, M.J. Potosnak, S.J. Zarnoch, J.Zhang. **2005**. Increased leaf area dominates carbon flux response to elevated CO_2 in stands of *Populus deltoides* (Bartr.). *Global Change Biology*, 11 (5): 716–731.

Barth, M., J.P. McFadden, J.L. Sun, C. Wiedinmyer, C.P. huang, B. Collins, R. Griffin, M. Hannigan, T. Karl, S.W. Kim, S. Lasher-Trapp, S. Levis, M. Litvak, N. Mahowald, K. Moore, S. Nandi, E. Nemitz, A. Nenes, M. Potosnak, T.M. Raymond, J. Smith, C. Still and C. Stroud. **2005**. Coupling between land ecosystems and the atmospheric hydrologic cycle through biogenic aerosol pathways. *Bulletin of the American Meteorological Society*, 86 (12): 1738–1742.

Karl, T., M. Potosnak, A. Guenther, D. Clark, J. Walker, J. Herrick and C. Geron. **2004**. Exchange Processes of Volatile Organic Compounds above a Tropical Rainforest – Implications for Modeling Tropospheric Chemistry above Dense Vegetation, *Journal of Geophysical Research*, 109 (D18): Art. No. D18306.

Engel, V.C, K.L. Griffin, R. Murthy, L. Patterson, C.A. Klimas and M.J Potosnak. **2004**. Growth CO_2 modifies the transpiration response of *Populus deltoides* to drought and vapor pressure deficit, *Tree Physiology*, 24 (10): 1137–1145.

Rosenstiel, T.N., M.J. Potosnak, K.L. Griffin, R. Fall and R.K. Monson. **2003**. Increased CO_2 uncouples growth from isoprene emission in an agriforest ecosystem, *Nature*, 421:256-259.

Griffin, K.L., M. Turnbull, R. Murthy, G.H. Lin, J. Adams, B. Farnsworth, T. Mahato, G. Bazin, M. Potosnak and J.A. Berry. **2002**. Leaf respiration is differentially affected by leaf vs. stand-level night-time warming. *Global Change Biology* 8, 479–485. [Note: Potosnak misspelled as Potasnak].

Logan, B.A., R.K. Monson and M.J. Potosnak. **2000**. Biochemistry and physiology of foliar isoprene production, *Trends in Plant Science* 5:477–481.

Potosnak, M.J., S.C. Wofsy, A.S. Denning, T.J. Conway, J.W. Munger and D.H. Barnes. **1999**. Influence of biotic exchange and combustion sources on atmospheric CO_2 concentrations in New England from observations at a forest flux tower, *Journal of Geophysical Research* 104:9561–9569.

Book chapters, invited commentaries, and other scholarly works receiving editorial review

Potosnak, M.J. **2014**. Commentary: Including the interactive effect of elevated CO_2 concentration and leaf temperature in global models of isoprene emission. *Plant, Cell & Environment*, 37:1723–1726.

Alan H. Strahler and Mark Potosnak. **2011**. *Laboratory Manual for Physical Geography*, Wiley.

Potosnak, M.J. **2009**. Book Review: Volatile Organic Compounds in the Atmosphere, *Bulletin of the American Meteorological Society*, September, 1357–8.

Trostdorf, C.R., L.V. Gatti, A. Yamazaki, M.J. Potosnak, A. Guenther, W.C. Martins, J.W. Munger. **2004**. Seasonal cycles of isoprene concentrations in the Amazonian rainforest, *Atmospheric Chemistry and Physics Discussions*, 4:1291–1310.

Stephens B.B., S.C. Wofsy, R.F. Keeling, P.P. Tans and M.J. Potosnak. **1999**. The CO_2 budget and rectification airborne study: Strategies for measuring rectifiers and regional fluxes, *Inverse Methods in Global Biogeochemical Cycles*, P. Kasibhatla *et al.*, eds., Geophysical Monograph Series, volume 114, American Geophysical Union.

Scholarly papers presented (limited to DePaul career)

Conference oral presentations

Potosnak, Mark J, Pinaki Banerjee, Max Berkelhammer, Rajesh Sankaran, Veerabhadra Rao Kotamarthi, Robert L Jacob, Peter H Beckman, Sean Shahkarami, Daniel Horton and Charlie Catlett. **2019**. Array of Things: A high-density, urban deployment of low-cost air quality sensors. *American Geophysical Union Fall Meeting*, conference presentation, San Francisco, CA, December 9–13, 2019.

Potosnak M. J. & Mistry A. & Beck-Winchatz B. & Ritter P., **2017** "Tropospheric Sounding with Low-Cost Particulate Matter Sensors", Academic High Altitude Conference 2017(1). doi: https://doi.org/10.31274/ahac.3459. [Note: same work as listed above under "Book chapters, invited commentaries, and other scholarly works receiving editorial review."]

Potosnak, Mark and Bernhard Beck-Winchatz. **2013**. Effectiveness of a high-altitude balloon project compared to conventional environmental science laboratory projects conducted by undergraduate students in an environmental chemistry course, *Proceedings of the 4th Annual Academic High-Altitude Conference*. Upland, IN: Taylor University, June 26–27, 2013.

Potosnak, Mark, Lauren LeStourgeon, Stephen Pallardy, Lianhong Gu, Alex B. Guenther, Thomas Karl and Chris Geron. **2012**. Annual cycle of whole-system isoprene fluxes from an oak-dominated forest, *American Geophysical Union Annual Meeting*, San Francisco, CA, December 3–7, 2012.

Potosnak, M., Beck-Winchatz, B. and Jabon, D. **2011**. Balloon-Related Laboratory Activities for Science Course, *Proceedings of the 2nd Annual Academic High-Altitude Conference*, Ames, IA, June 22–24, 2011. (This presentation was delivered by Dr. Beck-Winchatz.)

Potosnak, Mark J, Mark A Friedl, Nathan Phillips, Lucy Hutyra, Adam Sibley. **2010**. Early career invited oral presentation: Urban Carbon Dioxide Concentration and Flux Measurements from a Building Rooftop in Boston, Massachusetts, *Urban Environmental Pollution conference*, Boston, MA June 21–32 2010.

Conference posters

Petralia [U], Katherine and Mark J Potosnak. **2022**. Particulate Matter Emissions from Prescribed Fires in the Greater Chicago Area. *American Geophysical Union Fall Meeting*, poster presentation, Chicago, IL, December 12–16, 2022.

Wang, Hui, Alex B Guenther, Xiaoyan Jiang, Roger Seco and Mark J Potosnak. **2021**. Modeling of the impact of drought and heatwaves on isoprene emission. *American Geophysical Union Fall Meeting*, poster presentation, New Orleans, LA, December 13–17, 2021.

Muradyan, Paytsar, Veerabhadra Rao Kotamarthi, Richard Coulter, Mark J Potosnak, Yuki Hamada, David Gartman, Ryan C Sullivan, Evan Keeler and Youngsoo Chang. **2021**. Modeling of the impact of drought and heatwaves on isoprene emission. *American Geophysical Union Fall Meeting*, poster presentation, New Orleans, LA, December 13–17, 2021.

Potosnak, Mark J, Pinaki Banerjee, Rajesh Sankaran, Veerabhadra Rao Kotamarthi, Robert L Jacob, Peter H Beckman and Charlie Catlett. **2018**. Array of Things: Characterizing low-cost air quality sensors for a city-wide instrument. *American Geophysical Union Fall Meeting*, conference presentation, Washington, DC, December 10–14, 2018.

Potosnak, M.J., B. Beck-Winchatz, P Ritter. **2016**. Low-cost Citizen Science Balloon Platform for Measuring Air Pollutants to Improve Satellite Retrieval Algorithms. *American Geophysical Union Fall Meeting*, conference presentation, San Francisco, CA, December 12–16, 2016.

Potosnak, Mark, Bernhard Beck-Winchatz and Paul Ritter. **2016**. Low-cost HAB platform to measure particulate matter in the troposphere, *Proceedings of the 2016 Annual Academic High-Altitude Conference*. St Paul, MN: St Catherine University, June 29–July 1, 2016.

Potosnak, M.J., M. Pocs[U], A. Bouche[U], K. Roberts[U], C. Goedde, B. Beck-Winchatz. **2014**. A high-altitude balloon platform to measure regional carbon dioxide exchange from agricultural systems. *American Geophysical Union Fall Meeting*, conference presentation, San Francisco, CA, December 15–19, 2014.

Potosnak, Mark, Lauren LeStourgeon[U], Stephen Pallardy, Lianhong Gu, Alex B. Guenther, Thomas Karl and Chris Geron. **2012**. Annual cycle of whole-system isoprene fluxes from an oak-dominated forest, *Gordon Research Conference on Biogenic Hydrocarbons & the Atmosphere,* Lewiston, ME, June 24–29, 2012.

Potosnak, Mark, Brad Baker, Stephen Disher, Kevin Griffin, and Sydonia BretHarte. **2011**. Isoprene Fluxes from a Tundra Ecosystem, *3rd iLEAPS (Integrated Land Ecosystem-Atmosphere Process Study) Conference*, Garmisch-Partenkirchen, Germany, September 18–23, 2011.

Potosnak, M, Baker, B, Disher, S, Griffin, K, Bret-Harte, S. **2010**. Isoprene Fluxes from a Tundra Ecosystem, *American Geophysical Union Annual Meeting*, San Francisco, CA, December 13–17, 2010.

Potosnak, Mark J, Mark A Friedl, Nathan Phillips, Lucy Hutyra, Adam Sibley. **2009**. Urban Carbon Dioxide Concentration and Flux Measurements from a Building Rooftop in Boston, Massachusetts, *American Geophysical Union Annual Meeting*, San Francisco, CA, December 14–18, 2009.

Graduate student theses published at Digital Commons @ DePaul

Drosos, Elene, "Ozone Gardens: Impacts of Air Quality on Native Plants in Chicago" (**2024**). College of Science and Health Theses and Dissertations. 553.
https://via.library.depaul.edu/csh_etd/553

Mistry, Aarti, "Road Salt Effects on Leaf-Level Isoprene Emission" (**2022**). *College of Science and Health Theses and Dissertations*. 554.
https://via.library.depaul.edu/csh_etd/554

Undergraduate student theses published in DePaul Discoveries

Keller, Iris (**2025**) "Fireworks and Wood Combustion Impacts on Air Quality," DePaul Discoveries: Volume 14, Article 14.
Available at: https://via.library.depaul.edu/depaul-disc/vol14/iss1/14

Johnson, Jacob A. (**2024**) "Spatial and Temporal Analysis of PM 2.5 Concentrations in Chicago Along the Lakefront Trail Using Wearable Air Quality Sensors," DePaul Discoveries: Volume 13, Article 13.
Available at: https://via.library.depaul.edu/depaul-disc/vol13/iss1/13

Petralia, Katherine (**2023**) "Particulate Matter Emissions from Prescribed Burns in the Chicagoland Area," DePaul Discoveries: Volume 12, Article 9.
Available at: https://via.library.depaul.edu/depaul-disc/vol12/iss1/9

Salas, Gavin D. (**2023**) "Monitoring Personal Exposure to Air Quality Gradients while Biking on an Elevated Urban Trail," DePaul Discoveries: Volume 12, Article 8.
Available at: https://via.library.depaul.edu/depaul-disc/vol12/iss1/8

Núñez, Janet G. (**2022**) "Effects of Elevated CO2 Concentrations and Elevated Temperatures on Isoprene Emissions of Rhamnus cathartica (European buckthorn), Quercus rubra (red oak) and Quercus michauxii (swamp chestnut oak)," *DePaul Discoveries*: Vol. 11: Iss. 1, Article 5.
Available at: https://via.library.depaul.edu/depaul-disc/vol11/iss1/5

Steffeck, Adam W.T. (**2021**) "Insignificant Impacts of COVID-19 Stay-At-Home Orders on Chicago Air Quality," DePaul Discoveries: Vol. 10 : Iss. 1, Article 2.
Available at: https://via.library.depaul.edu/depaul-disc/vol10/iss1/2/

Sykora, Thomas and Potosnak, Mark (**2021**) "High Altitude Ballooning as a Platform for Measuring Ozone Uptake over Agricultural Landscapes," DePaul Discoveries: Vol. 10 : Iss. 1 , Article 8.
Available at: https://via.library.depaul.edu/depaul-disc/vol10/iss1/8

Mistry, Aarti P. (**2017**) "The Effects of Isoprene Emission from Native and Invasive Trees on Local Air Quality," DePaul Discoveries: Vol. 6 : Iss. 1 , Article 6.
Available at: https://via.library.depaul.edu/depaul-disc/vol6/iss1/6

Abbate, Joseph M. (**2017**) "The Mobile Monitoring of Particulate Matter through Wearable Sensors and Their Influence on Students' Environmental Attitudes," DePaul Discoveries: Vol. 6 : Iss. 1 , Article 8.
Available at: https://via.library.depaul.edu/depaul-disc/vol6/iss1/8

Babiez, Mary J. (**2016**) "The Correlation between Basal Isoprene Emissions and Climate of the Native Range across Oak Species," DePaul Discoveries: Vol. 5 : Iss. 1 , Article 10.
Available at: https://via.library.depaul.edu/depaul-disc/vol5/iss1/10

Cole, Michael (**2016**) "Combinatory Effect of Changing CO2, Temperature, and Long-term Growth Temperature on Isoprene Emissions," DePaul Discoveries: Vol. 5 : Iss. 1 , Article 15.
Available at: https://via.library.depaul.edu/depaul-disc/vol5/iss1/15

Sabo, Cody (**2016**) "Using a High-Altitude Balloon Platform to Observe and Measure Ozone Uptake over Agricultural Landscapes in Central Illinois," DePaul Discoveries: Vol. 5 : Iss. 1 , Article 18.
Available at: https://via.library.depaul.edu/depaul-disc/vol5/iss1/18

Carter, Elizabeth (**2015**) "Do Oaks With a Provenance Related to Warmer Climates Emit More Isoprene?," DePaul Discoveries: Vol. 4 : Iss. 1 , Article 1.
Available at: https://via.library.depaul.edu/depaul-disc/vol4/iss1/1

Bouche, Angela M. (**2015**) "A High-Altitude Balloon Platform for Determining Regional Uptake of Carbon Dioxide over Agricultural Landscapes," DePaul Discoveries: Vol. 4 : Iss. 1 , Article 3.
Available at: https://via.library.depaul.edu/depaul-disc/vol4/iss1/3

Pocs, Monica (**2014**) "A High-altitude Balloon Platform for Exploring the Terrestrial Carbon Cycle," DePaul Discoveries: Vol. 3 : Iss. 1 , Article 2.
Available at: https://via.library.depaul.edu/depaul-disc/vol3/iss1/2

Nunez-Montelongo, Othon (**2014**) "The effect of short-term water stress on leaf isoprene emission," DePaul Discoveries: Vol. 3 : Iss. 1 , Article 3.
Available at: https://via.library.depaul.edu/depaul-disc/vol3/iss1/3

Kalat, Agnes (**2012**) "Soil and Leaf Lead Concentrations in the Lincoln Park Area," DePaul Discoveries: Vol. 1 : Iss. 1 , Article 8. (Note: co-advised with J. Montgomery)
Available at: https://via.library.depaul.edu/depaul-disc/vol1/iss1/8

Undergraduate student conference presentations and posters

Johnson, J. **2023**. Spatial and Temporal Analysis of PM 2.5 Concentrations in Chicago Along the Lakefront Trail Using Wearable Air Quality Sensors. DePaul STEM Showcase.

Petralia [U], K. **2022**. Particulate Matter Emissions from Prescribed Fires in the Greater Chicago Area, DePaul STEM Showcase.

Salas [U], G. **2022**. Portable Sensors As A Method For Air Quality Monitoring While Commuting On Bicycle, DePaul STEM Showcase.

Johnson [U], S. **2022**. Lichen Tree Preferences: Urban and Forest Habitats, DePaul STEM Showcase.

Steffeck[U], A. **2021**. Insignificant Impacts of COVID-19 Stay-At-Home Orders on Chicago Air Quality. Oral presentation, DePaul STEM Showcase.

Sykora[U], T. **2021**. High Altitude Ballooning as a Platform for Measuring Ozone Uptake over Agricultural Landscapes, DePaul STEM Showcase.

Steffeck[U], A. **2019**. Gas Chromatography Machine Calibration for Field Testing on Live Samples. Poster Presentation, DePaul Science Showcase.

Steffeck[U], A. **2018**. Gas Chromatography Machine Calibration for Field Testing on Live Samples. Poster Presentation, DePaul Science Showcase.

Kane[U], Frances. **2018**. Impact of Semi-Formal Environmental Education Activities on the Environmental Attitudes & Literacy of High School Students. Poster Presentation, DePaul Science Showcase.

Mistry[U], A. **2016**. The Impact of Isoprene Emitting Native and Invasive Trees on the Chicagoland Air Quality. Poster Presentation, DePaul Science Showcase.

Abbate[U], J. **2016**. The Mobile Monitoring of Particulate Matter through Wearable Sensors and Their Influence on Students' Environmental Attitudes. Poster Presentation, DePaul Science Showcase.

Sabo[U], C. **2015**. Using a High Altitude Balloon Platform to Measure Seasonal Ozone Flux over Agricultural Landscapes. Poster presentation, DePaul Science Showcase.

Cole[U], M. **2015**. Predicting Future Air Quality Using MEGAN, RACM, and Mid-Latitude Isoprene Emissions from Oaks, DePaul Science Showcase.

Babiez, M. **2015**. The Correlation between Basal Isoprene Emissions and Climate of the Native Range across Oak Species, Morton Arboretum Center for Tree Science – Undergraduate Research Fellowship Symposium.

Bouche[U], A. **2015**. A High-Altitude Balloon Platform to Measure Regional Carbon Dioxide Exchange from Agricultural Systems. Oral presentation, Academic High-Altitude Conference.

Sabo[U], C. **2015**. Using a High Altitude Balloon Platform to Measure Seasonal Ozone Flux over Agricultural Landscapes. Poster presentation, Academic High-Altitude Conference.

Bouche[U], A., B. Beck-Winchatz and M. Potosnak. **2015**. A High-Altitude Balloon Platform to Measure Regional Carbon Dioxide Exchange from Agricultural Systems. Chicago Wild Things conference.

Bouche[U], A., B. Beck-Winchatz and M. Potosnak. **2014**. A High-Altitude Balloon Platform to Measure Regional Carbon Dioxide Exchange from Agricultural Systems. DePaul Science Showcase.

Carter[U], E., M. Potosnak. **2014**. Do oaks from warmer climates emit more isoprene? Morton Arboretum Center for Tree Science – Undergraduate Research Fellowship Symposium.

Carter[U], E., M. Potosnak. **2014**. Do oaks from warmer climates emit more isoprene? Field Museum Undergraduate Research Symposium.

Nunez[U], O., M. Potosnak. **2013**. The effect of short-term water stress on leaf isoprene emission. DePaul Science Showcase.

Pocs[U], M., M. Potosnak. **2013**. A High-altitude Balloon Platform for Exploring the Terrestrial Carbon Cycle. DePaul Science Showcase.

Pocs[U], M., M. Potosnak. **2012**. A High-altitude Balloon Platform for Exploring the Terrestrial Carbon Cycle. The Great Midwest Regional Space Grant Conference.

Kalat[U], A., M. Potosnak, J. Montgomery. **2011**. Soil and Leaf Lead Concentrations near the Lincoln Park Area. DePaul Science Showcase.

Menton[U], A., M. Potosnak. **2011**. Characterizing Urban Forests with Google Earth. DePaul Liberal Arts and Sciences Undergraduate Research Conference.

Lestourgeon[U], L., M. Potosnak. **2011**. The effects of temperature and CO_2 concentration on plant isoprene production. The Great Midwest Regional Space Grant Conference.

Lestourgeon[U], L., M. Potosnak. **2011**. The effects of temperature and CO_2 concentration on plant isoprene production. DePaul Science Showcase.

Lestourgeon[U], L., M. Potosnak. **2011**. The effects of temperature and CO_2 concentration on plant isoprene production. Chicago Area Undergraduate Research Conference.

Roberts[U], K., M. Potosnak. **2011**. CO_2 concentrations through the troposphere. Chicago Area Undergraduate Research Conference.

Schulze[U], C., M. Potosnak, **2009**. The relationship between isoprene stimulation and photosynthesis reduction during drought stress in northern red oaks (Quercus rubra) and cottonwoods (Populus deltoides). Louis Stokes Alliances for Minority Participation Symposium.

Schulze[U], C., M. Potosnak, **2009**. The relationship between isoprene stimulation and photosynthesis reduction during drought stress in northern red oaks (Quercus rubra) and cottonwoods (Populus deltoides). DePaul Science Showcase.

Whitacre[U], C., M. Potosnak. **2008**. Urban Trees and Air Pollution: Impact of Traffic Exposure on Leaf Nitrogen Content. DePaul Science Showcase.

Invited research presentations

- Invited to give a seminar at Notre Dame, South Bend, "Array of Things: A New Kind of (Urban) Instrument" Jan **2020**.
- Invited to give a seminar at University of Innsbruck, Austria, "Array of Things: Evaluating a network of low-cost air quality sensors," Mar **2019**.
- Invited to give a talk at the Array of Things workshop at Argonne National Lab, "Evaluation of Air Quality Sensors" Aug **2018**.
- Invited to give a seminar at University of Helsinki, "Linking plants and air pollution in a changing world," May 3 **2018**.
- Invited to give a seminar at University of Illinois at Chicago, "Characterizing low-cost air quality sensors for a city-wide instrument," Apr **2018**.
- Invited to give a seminar at the University of Illinois at Chicago, "Linking plants and air pollution in a changing world," Oct **2017**.
- Invited to present at the Low-Cost Air Quality Sensor Workshop in Los Angeles, "Array of Things: (Developing) A Scientific Research Instrument in the Public Way," May **2017**.
- Investigating Climate Change and Remote Sensing (ICCARS) – Professional Learning Network webinar, "Plant-Atmosphere Interactions in a Changing Climate", Nov 22, **2015**.
- Presenter at the Faculty Symposium at Newman University, Witchita, KS, Aug 5–6, **2015**, on the topic of interdisciplinary teaching. Presented at four sessions over two days.
- Northern Illinois University, Geography Department, Mar 30, 2012.
- University of Chicago, Department of Geophysical Sciences, Dec 5, 2008.
- University of Nevada Reno, Plant Talk, Department of Biology, Mar 9, 2006.
- California State University Sacramento, Chemistry Department, Mar 3, 2006.
- University of California Berkeley, Alan Goldstein research group, Nov 1, 2005.

Other participation in scholarly meetings

- Presenter at the Metropolitan Chicago Data-science Corps annual conference held at Northwestern University, June **2024**.
- Attended "Biogenic Hydrocarbons and the Atmosphere: Biosphere-Atmosphere Interactions and Impacts in the Anthropocene," Gordon Research Conference, Barcelona, Spain, Jun **2024**.
- Co-organizer of the Metropolitan Chicago Data-science Corps annual conference held at DePaul University (Loop conference center), May **2023**.
- Invited to participate in "Improving Undergraduate STEM Education: Computing in Undergraduate Education (IUSE: CUE)," an NSF-funded workshop, Jul **2022**.
- Co-chair for "Biogenic Hydrocarbons and the Atmosphere: Bridging Ecology, Chemistry and Climate," Gordon Research Conference, Oxnard, California, Jun **2022**.

- Invited to participate in "SUSPIRE: Sustainable Urban Systems: Predictive, Interconnected, Resilient and Evolving," an NSF-funded workshop, Jul **2019**.
- Invited to participate in "Center for Urban Resilience and Environmental Sustainability (CURES) workshop," Jul **2019**.
- Invited to be a panel moderator at "Workshop on Urban Scale Processes and their Representation in High Spatial Resolution Earth System Models," Argonne National Laboratory, May **2019**.
- Vice-co-chair for "Biogenic Hydrocarbons and the Atmosphere: Connecting Volatiles and the Climate System from Leaf to Planet," Gordon Research Conference, Les Diablerets, Switzerland, Jun **2022**.
- Invited to be on a panel at the Low-Cost Air Quality Monitoring Tools Workshop, Los Angeles, May 15 – 16, **2017**.
- Selected as an attendee for the "Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere," Girona, Spain, Jun 26–Jul 1, **2016**.
- Selected as an attendee for the "Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere," Girona, Spain, Jun 29–Jul 4, **2014**.
- Moderator for "Catholicity & Incarnated Identities: Latin American Cases & Theological Reflections" session during DePaul's World Catholicism Week, April 16, **2013**.
- Selected as an attendee for the "Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere," Bates College, Lewiston, Maine, Jun 24–29, **2012**.
- Attended the "2012 Great Midwestern Space Grant Regional Meeting" in October **2012** with an undergraduate student, Monica Pocs, who gave a poster on, "A High-altitude Balloon Platform for Exploring the Terrestrial Carbon Cycle."
- Attended the "2011 Great Midwestern Space Grant Regional Meeting" in October **2011** with an undergraduate student, Lauren LeStourgeon, who won the undergraduate poster competition and gave an oral presentation, "The Effects of Temperature and CO2 Concentration on Plant Isoprene Emission."
- Participated in the **2010** summer seminar: "Negotiating Change: Critical Transitions, Tipping Points, and Cataclysmic Futures" sponsored by the College of Liberal Arts and Sciences.
- Participated as a panel respondent during DePaul's World Catholicism Week to a talk by CNN correspondent John Allen, "Sustainability and Catholic Mission," Apr **2010**.
- Sustainability and the Catholic University, University of Notre Dame, South Bend, IN, Oct 9–11, **2009**, attendee.

Service

Department

In general, the department of Environmental Science and Studies does not formally use committees for most service work. The following tasks were performed:

- Chaired the scholarship committee that grants awards to ENV students on behalf of the College of Science and Health. The work of this committee was expanded since college scholarships were administered at the unit level (2011 to present).
- Created a Student Handbook (2009) and continued making revisions (2009-2023). Made a major revision in 2022.
- Participated in designing and completing the department assessment project (2014-2015).
- Wrote a working paper to assist with proposed revisions to the B.S. curriculum (2010).
- Participated in Academic Program Review (2010, 2019-2022).

College

- Served on the college curriculum committee (2017 to 2023).
- Served as interim chair of the Graduate Research Excellence in Academics & Training (GREAT) strategic planning committee (2019 AQ to 2020 WQ).
- Served on the Graduate Research Excellence in Academics & Training (GREAT) strategic planning committee (2018 to 2021 SQ).
- Served on the college colloquium committee (2013 to 2016).
- Served as an associate editor for *DePaul Discoveries* (2014 to 2018).
- Gave a talk to the Biology Department, "Biosphere-Atmosphere Interactions" Oct **2015**.
- Summer advisor for CSH (and previously LAS) incoming first-year and transfer students: summers of 2009 – present. This service has a salary compensation.
- Elected by the faculty of DePaul University's College of Liberal Arts and Sciences to serve on the Faculty Governance Council in 2010. In the spring of 2011, worked extensively to develop a new governance document for LAS. Due to the creation of the CSH, ended service in June 2011.
- Gave a talk in the Physics Colloquium on my research activities "Linking plants and air pollution in a changing world" (February 2011).

University

- Served on the Physical-Plant Sustainability Advisory Group for DePaul's Climate Action Plan (**2024** to present).
- Served as a member of the Society of Vincent de Paul Professors (**2023** to present).
- Selected as a faculty representative for the Presidential Sustainability Committee (**2021** to **2024**).
- Gave a presentation on "Climate change science and the Inflation Reduction Act," for the Presidential Sustainability Committee and Just DePaul, Apr, **2023**.
- Gave an online presentation "A Scientific Explanation of Environmental Pollutants" for "Noxious and Neglected Neighborhoods: Examining the Impacts of Environmental Racism in Chicago" for the DePaul Law School, Apr, **2023**.
- Gave a presentation at DePaul's Innovation Day, Jan, **2023**.

- Selected as a member of the 2019-2021 cohort of the Vincentian Mission Institute, with activities continuing through 2021-2022 due to pandemic delays.
- Chair of the Scientific Inquiry Domain committee. Responsible for assessment, syllabus review and approving new SI courses (2014 to 2021).
- Served as a member on the Faculty Council's Quantitative Reasoning/Scientific Inquiry Task Force (2019 to 2020).
- Served on the Quarters to Semesters Exploratory Task Force (2018 to 2019).
- Elected as a Faculty Council representative for the College of Science and Health, three-year term (2016 to 2019).
- Served on the second School for New Learning Task Force (2017 to 2018).
- Served on the Physical Environment Committee of Faculty Council (2016 to 2018).
- Served on the Faculty Vetting Committee for the Presidential Search (2016 to 2017).
- Served on the Drone Task Force (2015 to 2016).
- Served as the University representative for the Udall Foundation's national scholarship competition. Worked with multiple departments to recruit applicants and help hone their essays (Jan 2010 to 2018).
- Advisor in the First Year Academic Success Program FYAS, which involves meeting with incoming students during summer advising sessions and also offering additional support during the academic year. In particular, need to work with any assigned FYAS students that receive an Academic Progress Report that has concerns (June 2013 to 2019). This service has a salary compensation.
- Gave talks twice for DePaul's Arditti Center for Risk Management conferences: "Climate Risk: Identification, Assessment, Risk Management" July 7, 2016 and "After the Storm: Assessing, Mitigating, and Managing Climate Risk" Aug 7, 2018.
- Selected as an Ozanam Faculty Fellow, part of DePaul's Explore Your Purpose initiative, 2017.
- Gave a talk "Saints Francis and Vincent: Realizing the Encyclical at DePaul" at the St. Vincent Prayer Breakfast, Sep 29, 2015.
- Member of the Scientific Inquiry Domain committee. The committee reviewed applications of courses for inclusion in SID and performed assessment on how current courses are meeting the learning outcomes (2011 to 2014).
- Assisted in organizing and also participated in a panel discussion on the Art and Science of Climate Change at the DePaul Art Museum as part of the exhibit Climate of Uncertainty, January, 2013 which was attended by over 80 people.
- Chair of the Research Working Group for the Sustainability Initiatives Task Force. The working group continued the development of recommendations for DePaul's Sustainability Institutional Plan. Organized and participated in a series of lectures on climate change held

at DePaul. Stepped down as chair in the spring of 2012, because went on a research leave (2011–2012).

- Gave a talk to the DePaul Alumni Association on understanding the Earth's changing climate (2012).
- Attended Collegium, an effort by a consortium of Catholic colleges and universities to recruit and develop faculty who can articulate and enrich the spiritual and intellectual life of their institutions (June 2011).
- Lead a discussion sponsored by the Office of Mission and Values on Bill McKibben's Eaarth (March 2011).
- Gave the Lunch with Vincent talk on "A Vincentian View on climate change: what must be done" (October 2011).
- Gave a talk sponsored by the Catholic Studies Program on "A Catholic Perspective on Climate Change" (October 2011).
- Gave a talk to the Muslim Student Association at DePaul on the Pakistani flood that occurred in August 2010 (October 2010).
- Designed and implemented a web interface to monitor power usage for University Hall. The website served as the backbone for an undergraduate student research project (2009).
- Participated in the Office of Mission and Values' Spring Salon Series on the Catholic Intellectual Tradition and led a session devoted to sustainability and climate change (spring 2009).
- Participated as a stakeholder in developing the joint School of Education/LA&S Five-year program on behalf of the Environmental Science Program (2009).

Community

- Participated on a panel "What Now? Organizing for Justice After the Election" at Lake Street Church in Evanston, Illinois, **November 2024**.
- Presented on climate change at the Thriving Congregations for Environmental Justice: Engaging Clergy and Laity workshop, Woodstock, Illinois, October **2024**.
- Appointed as the academic sector representative to the Environmental Commission of the Board of Cook County Commissioners (2019 – 2024).
- Assisted in founding the Encyclical Working Group of the Archdiocese of Chicago. Coordinated events to promote Pope Francis's encyclical on the environment, *Laudato Si'* (2015 – present). As part of the Garden Committee, facilitated the installation of gardens and green infrastructure at houses of worship throughout the Chicagoland area. In this role and as an Ambassador for the Catholic Climate Covenant since 2011, gave over 35 talks during the last 10 years to various community groups. Some examples include Morton Grove Community Church (2023), St Ignatius College Prep (2023), St Mary Catholic Church, Evanston (2020), Luther Village retirement community (2019), Maine East High School (2018, online), St Jude Social Justice Ministry Day (2017), Blessed Sacrament (2017), Dominican University's Earth Week (2017), St Therese Chinese Catholic Church (2016), Christ Lutheran Church (2016) and St Peter's Catholic Church in the Loop (2015).

- Appeared as a guest of NBC 5 Chicago news on the Canadian wildfire smoke, Jun 27, **2023**.
- Co-presented with Dr. Rachel Licker (Union of Concerned Scientists) on climate change for the Faith in Place monthly webinar, Jun **2023**.
- Co-presented and attended with Dr. Rachel Licker (Union of Concerned Scientists) a two-day workshop on climate change for ministers sponsored by Creation Justice Ministries, Madison, Wisconsin, May **2023**.
- Co-presented with undergraduate student Katherine Petralia "Air Quality Impacts of Prescribed Burns in the Chicagoland Area" for the McHenry County Conservation District, Feb, **2023**.
- Appeared as a guest on Fox 32 Chicago "Why the heat wave is so bad and how climate change will impact future" Jul **2022**.
  https://www.fox32chicago.com/video/1095237
- Gave an Earth Day talk at Velocity Environmental Health and Safety, Apr **2019**.
- Presented on climate change education for the Peggy Notebaert Nature Museum twice, Jan **2019** and Jan **2020**.
- Presented on climate change and its moral aspects to the State Microscopical Society of Illinois, Jan **2018**.
- Appeared as a guest on Chicago Tonight (WTTW Channel 11) "Catholics and Climate Change" Jun **2015**.
  http://chicagotonight.wttw.com/2015/06/23/catholics-and-climate-change
- A guest on Catholic Conference of Illinois, Relevant Radio 950 AM, discussing the pope's encyclical on the environment, Jul **2015**.
- A guest on Catholic Community of Faith, Relevant Radio 950 AM, discussing the pope's encyclical on the environment, Jun **2015**.
- Quoted by Reuters article, "Pope's climate change encyclical could sway U.S. opinion: scientists" Jun **2015**.
  http://www.reuters.com/article/us-pope-environment-usa-scientists-idUSKBN0OX17W20150617
- Quoted in a Chicago Tribune article, "Pope Francis makes Chicago Catholics see green" Jun **2015**.
  http://www.chicagotribune.com/news/ct-pope-francis-climate-change-encyclical-met-20150618-story.html#page=1
- Served as an alumni interviewer for Harvard University (2010-present).
- Gave a talk on "Hot topics in climate change science" for a workshop on climate change science for informal science educators, organized by Climate Change Education taskforce of Chicago Wilderness.
- Gave a talk on Air Quality of Chicago to high school students attending a workshop sponsored by the Student Conservation Association (Dec 2013).

- Invited to give a workshop on Teaching the Science of Climate Change to high school educators at the Newberry Library (October 2013).
- Gave a talk on Four Hot Topics in Climate Change Science for the Green Technology Organization of Greater Chicago (June 2013).
- Appeared on the WBBM radio show At Issue with Craig Dellimore discussing severe weather and climate change (March 2013). http://chicago.cbslocal.com/2013/03/08/scientists-severity-of-recent-storms-more-proof-of-climate-change/
- Invited to co-lead a workshop on "Climate Change and Its Impact on the People of Africa" at a conference held by the African Faith & Justice Network called "Celebrating 30 years of Education and Advocacy for Justice for Africa!" at University of Notre Dame (Mar 2013).
- Gave a keynote lecture on The Science of Climate Change at the Climate Crisis Conference in Chicago (Feb 2013).
- Poster judge at the Chicago Area Undergraduate Research Symposium at Merchandise Mart, Apr 2012.
- Quoted in an Associated Press article "Young Americans less interested in the environment than previous generations" Mar 2012 that was picked up by over 100 media outlets.
- Appeared on the local radio show, Catholic Community of Faith run by the Archdiocese of Chicago and spoke on the Catholic perspective on climate change (April 2011).
- Poster judge at the Chicago Area Undergraduate Research Symposium at the Museum of Science and Industry, Apr 2011.
- Participated in the Hay Leadership Project in collaboration with the Ignatian Spirituality Project. Each Friday morning meet for one hour with homeless individuals that are struggling with addiction to drugs and alcohol (Spring 2010).
- Poster judge at the Chicago Area Undergraduate Research Symposium at DePaul University, Apr 2010.
- Meet with a student, Kamia Jones, from Walter Payton High School to tutor her in chemistry for one hour per week (Spring 2010).
- Gave a talk to high school students on climate change issues at the Notebaert Museum (Jan 2010).
- Poster judge at the American Association for the Advancement of Science meeting in Chicago, IL, Feb, 2009.

Professional activities

Journal ad hoc reviewer

- Plants (2024)
- Fire (2024)
- Atmospheres (2024, 2023, 2022, 2021)
- Bulletin of the American Meteorological Society (2024)

- Air Toxics (2023, 2024)
- Environmental Management (2023)
- Nature Communications (2023, 2021)
- Atmospheric Chemistry and Physics (2023, 2022, 2015)
- Sensors (2022 3x, 2020)
- Sustainability (2023)
- Air (2023)
- Tree Physiology (2023)
- Journal of Geophysical Research-Atmospheres (2022, 2020, 2017, 2016, 2015, 2014)
- Plant, Cell and Environment (2022, 2019, 2016, 2014)
- Water (2022)
- EGUSphere (2022)
- International Journal of Geo-Information (2022)
- Eng (2022)
- Environmental Research Ecology (2022)
- Plant Science (2021)
- Agricultural and Forest Meteorology (2021, 2020, 2018, 2017, 2014)
- Forests and Atmospheres (2021, 2020, 2019)
- Proceedings of the National Academy of Sciences (2020, 2019, 2017)
- Phytochemistry (2020)
- Science of the Total Environment (2020, 2019, 2018, 2017)
- Biogeosciences (2020, 2016)
- PlosOne (2019, 2016)
- Atmospheric Environment (2019, 2018, 2014)
- Nature Geoscience (2022, 2015)
- Environmental Pollution (2015)
- Journal of Bioenergetics and Biomembranes (2015)
- Environmental Pollution (2014)
- American Chemical Society book chapter (2014)
- Environmental Research Letters (2021, 2013)

- Die Erde (2013)
- Associate Editor for Forests and the Atmosphere, part of Forests and Global Change (2018 to present).
- In previous years: Molecules, Biometeorology, Science of the Total Environment, Chemosphere, Atmospheric Chemistry and Physics, Forest Ecology and Management, New Phytologist, Journal of Environmental Quality, Environmental Monitoring and Assessment, Journal of Geophysical Research, International Journal of Plant Science, Oecologia and Atmospheric Environment.

Grant ad hoc reviewer

- National Science Foundation (2024, 2023, 2022, 2016, 2014, 2013)
- French National Research Agency (2022, 2021)
- European Research Council (2017)
- NASA Experimental Program to Stimulate Competitive Research (2016, 2015, 2014 2x, 2013)
- Belgium Science Policy (2015)
- NASA opportunities in STEM (2015)
- Environmental Protection Agency, in-person panel review (2014)
- European Science Foundation

Professional affiliations

- American Geophysical Union
- American Meteorological Society
- Sigma Xi

Awards and recognitions

- Elected to the Society of Vincent de Paul Professors, which is an organization of faculty whose goal is to enhance the educational mission of the university in ways consistent with its distinctive values, such as Vincentian personalism, social justice, and service (**2023**).
- Elected as co-vice-chair and in turn to be co-chair for the Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere. Elected at 2016 meeting, was co-vice-chair in 2018 and was co-chair in 2022. Note, did all planning for the scheduled 2020 meeting, but was cancelled due to Covid-19.
- Elected by the faculty of DePaul University's College of Liberal Arts and Sciences to serve of the Faculty Governance Council (1 term: 2010–2012)
- Elected to serve as the Associate Director for the Atmospheric Sciences Program at the University of Nevada, Reno (2 terms: 2005–2006, 2006–2007)
- Elected to serve as one of two Nevada System of Higher Education member representatives for the University Corporation for Atmospheric Research (2004–2007)
- Elected to the Desert Research Institute's Faculty Senate (2006–2007)

- Selected to present the closing synthesis speech at the 2004 Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere at Il Ciocco, Barga, Italy (2004)
- Selected for membership in Sigma Xi (2001)
- National Science Foundation Graduate Research Fellowship (1997–2000)
- American Meteorological Society Industry Graduate Fellowship (1996–1997)