

Daniel E. Horton
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- **RESEARCH INTERESTS**

Climate change, extreme climate events, climate impacts, mitigation co-benefits, event attribution, air quality, paleoclimatology, planetary habitability, and earth system models

- **EDUCATION**

Ph.D., Geological Sciences, University of Michigan, Ann Arbor, MI	2011
B.S., Atmospheric Sciences, Texas A&M University, College Station, TX	2002
B.S., Physics (<i>cum laude</i>), minor Geology, Tulane University, New Orleans, LA	2001

- **EMPLOYMENT**

Associate Professor, Northwestern University, Evanston, IL	
Dept. of Earth & Planetary Sciences	2024-present
Dept. of Civil & Environmental Engineering (by courtesy)	2024-present
Assistant Professor, Northwestern University, Evanston, IL	
Dept. of Earth & Planetary Sciences	2015-2024
Dept. of Civil & Environmental Engineering (by courtesy)	2018-2024
Postdoctoral Research Scholar, Stanford University, Stanford, CA	
Dept. of Earth System Science	2011-2015
Lecturer, University of Michigan, Jackson Hole, WY	
Rocky Mountain Field Station	2010
Research Assistant, University of Michigan, Ann Arbor, MI	
Dept. of Geological Sciences	2006-2011
Graduate Student Mentor, University of Michigan, Ann Arbor, MI	
Dept. of Geological Sciences	2008-2009
Graduate Student Instructor, University of Michigan, Ann Arbor, MI	
Dept. of Geological Sciences	2007-2009
U.S. Air Force Weather Officer	
Deputy Flight Commander, Aviano AB, Italy	2005-2006
Assistant Flight Commander, Sembach AB, Germany	2002-2005
Americorps – South Whidbey Island, Langely, WA	
Trail Boss	1998-1999

- **PUBLICATIONS**

Mentorship key: high school****, undergraduate***, graduate**, or postdoc*
Candidate's name underlined and last indicates candidate is the senior author or PI

54. R.D. Harp*, T.N. Taguela, A.A. Akintomide & D.E. Horton (under revision)
Evaluation of historical precipitation interannual variability in CMIP6 over the United States, *Environmental Research: Climate*.
53. T. Olsen, A.M Pfeiffer, N.J. Finnegan, C. Li** & D.E. Horton (under revision)
Impacts of post-fire debris flows on fluvial morphology and sediment transport in a California Central Coast Stream, *Journal of Geophysical Research – Earth Surfaces*.
52. V.A. Lang**, S.F. Camilleri*, J.M. Acosta Córdova, N. Deylami, M.H. Harris, L. Koehler, B. Urbaszewski & D.E. Horton (under review) Assessing the air quality, public health, and equity implications of an Advanced Clean Trucks policy for Illinois, *Frontiers of Earth Science*.
51. P.M. Graffy, A. Sunderraj, M.A. Visa, C. Miller, B.W. Barrett, S. Rao, S.F. Camilleri*, R.D. Harp, C. Li**, A. Breneman, J. Chan, A. Kho, N. Allen & D.E. Horton (under 2nd review) Methodological approaches for measuring the association between heat exposure and health outcomes: a comprehensive global scoping review, *GeoHealth*.
50. S. Huang, S. Wang, Y. Gan, C. Wang, D.E. Horton, C. Li**, X. Zhang, D. Niyogi, J. Xia & N. Chen (accepted) Widespread global exacerbation of extreme drought induced by urbanization, *Nature Cities*.
49. S. Huang, Y. Gan, N. Chen, C. Wang, X. Zhang, C. Li** & D.E. Horton (2024)
Urbanization enhances channel and surface runoff: A quantitative analysis using both physical and empirical models over the Yangtze River Basin, *Journal of Hydrology*, doi.org/10.1016/j.jhydrol.2024.131194.
48. B.B. Sageman, M.M. Jones, M.A. Arthur, I. Niezgodzki & D.E. Horton (2024) Late Cenomanian Plenus event in the Western Interior Seaway, *Cretaceous Research*, doi.org/10.1016/j.cretres.2023.105798.
47. S.F. Camilleri*, G.H. Kerr, S.C. Anenberg & D.E. Horton (2023) All-cause NO₂-attributable mortality burden and associated racial and ethnic disparities in the U.S., *Environmental Science & Technology Letters*., doi.org/10.1021/acs.estlett.3c00500.
46. Y. Gao, Y. Wu, X. Guo, W. Kou, S. Zhang, L.R. Leung, X. Chen, J. Lu, N.S. Diffenbaugh, D.E. Horton, H. Wang, X. Yao, H. Gao & L. Wu (2023) More frequent and persistent heat waves due to increased temperature skewness projected by a high-resolution Earth System Model, *Geophysical Research Letters*, doi.org/10.1029/2023GL105840.

45. A. Montgomery**, M.I.G. Daepf, M.I. Abdin, S. Malvar, S. Counts & D.E. Horton (2023) Intraurban NO₂ hotspot detection across multiple air quality products, *Environmental Research Letters*, doi.org/10.1088/1748-9326/acf7d5.
44. M.A. Visa***, S.F. Camilleri*, A. Montgomery**, J.L. Schnell*, Z. Adelman, M. Janssen, S.C. Anenberg, E.A. Grubert & D.E. Horton (2023) Neighborhood-scale air quality, public health, and equity implications of multi-modal vehicle electrification, *Environmental Research: Infrastructure and Sustainability*, doi.org/10.1088/2634-4505/acf60d.
43. S.F. Camilleri*, A. Montgomery**, M.A. Visa***, J.L. Schnell*, Z. Adelman, M. Janssen, E.A. Grubert, S.C. Anenberg & D.E. Horton (2023) Air quality, health & equity implications of electrifying heavy-duty vehicles, *Nature Sustainability*, doi.org/10.1038/s41893-023-01219-0.
42. C. Li**, G. Yu, J. Wang & D.E. Horton (2023) Toward improved regional hydrological model performance using a novel soil data-informed calibration method, *Water Resources Research*, doi.org/10.1029/2023WR034431.
41. R.D. Harp* & D.E. Horton (2023) Observed changes in interannual precipitation variability in the United States, *Geophysical Research Letters*, doi.org/10.1029/2023GL104533.
40. A. Montgomery**, J.L. Schnell*, Z. Adelman, M. Janssen & D.E. Horton (2023) Simulation of neighborhood-scale air quality with two-way coupled WRF-CMAQ over southern Lake Michigan-Chicago region, *JGR: Atmospheres*, doi.org/10.1029/2022JD037942.
39. R.D. Harp* & D.E. Horton (2022) Observed changes in daily precipitation intensity in the United States, *Geophysical Research Letters*, doi.org/10.1029/2022GL099955.
38. L. Yang***, N. Zerega, A. Montgomery** & D.E. Horton (2022) Potential of breadfruit cultivation to contribute to a climate-resilient low latitude food system, *PLOS Climate*, doi.org/10.1371/journal.pclm.0000062.
37. C. Li**, A.L. Handwerger, J. Wang, W. Yu, X. Li, N.J. Finnegan, Y. Xie, G. Buscarnera & D.E. Horton (2022) Augmentation and use of WRF-Hydro to simulate runoff-generated debris flow hazards in burn scars, *Natural Hazards and Earth System Science*, doi.org/10.5194/nhess-22-2317-2022.
36. K.R. Marion Suiseeya, M.G. O'Connell, E. Lesoso, M. DeFoe, A. Anderson, M. Bang, P. Beckman, A. Boyer, J. Dunn, J. Gilbert, J. Hester, D.E. Horton, D. Bizhikiins, P. Kebec, N. Loeb, P. Loew, W. Miller, K. Moffit, A.I. Packman, M. Waasegiizhig, B. Redbird, J. Rogers, R. Sankaran, J. Schwoch, P. Silas, W. Twardowski & N. Zerega (2022) Waking from paralysis: revitalizing conceptions of

climate knowledge and justice for more effective climate action, *The ANNALS of the American Academy of Political and Social Science*, doi.org/10.1177/00027162221095495.

35. J.M. Garrido-Perez, C. Ordóñez, D. Barriopedro, R. García-Herrera, J.L. Schnell, & D.E. Horton (2021) A storyline view of the projected role of remote drivers on summer air stagnation in Europe and the United States, *Environmental Research Letters*, doi.org/10.1088/1748-9326/ac4290
34. D.E. Horton (2021) Assessing co-benefits incentivizes climate mitigation action, *One Earth*, doi.org/10.1016/j.oneear.2021.08.003.
33. M.S. Bryan, J. Sun, J. Jagai, D.E. Horton, A. Montgomery**, R. Sargis & M. Argos (2021) COVID-19 mortality and neighborhood characteristics in Chicago, *Annals of Epidemiology*, doi.org/10.1016/j.annepidem.2020.10.011.
32. H. Chen**, Z. Zhuchang, A. Youngblood, E.T. Wolf, A. Feinstein, & D.E. Horton (2021) Persistence of flare-driven atmospheric chemistry on rocky habitable zone worlds, *Nature Astronomy*, doi.org/10.1038/s41550-020-01264-1.
31. J.L. Schnell*, D.R. Peters***, D. Wong, X. Lu, H. Zhang, H. Guo, P.L. Kinney & D.E. Horton (2020) Potential for electric vehicle adoption to mitigate extreme air quality events in China, *Earth's Future*, doi.org/10.1029/2020EF001788.
30. J.J. Hess, N. Ranadive, C. Boyer, L. Aleksandrowicz, S. Annenberg K. Aunan, K. Belesova, M. Bell, S. Bickersteth, K. Bowen, M. Burden, D. Campbell-Lendrum, E. Carlton, G. Cisse, F. Cohen, H. Dai, A. Dangour, P. Dasgupta, H. Frumkin, R. Gould, A. Haines, S. Hales, I. Hamilton, T. Hasegawa, M. Hashizume, Y. Honda, D.E. Horton, A. Karambelas, H. Kim, P. Kinney, I. Kone, K. Knowlton, J. Lelieveld, V. Limay, Q. Liu, L. Madaniyazi, M. Martinez, D. Mauzerall, J. Milner, J. Mossinger, T. Neville, M. Nieuwenhuijsen, S. Pachauri, G. Peng, F. Perera, H. Pineo, J. Remais, R. Saari, J. Sampetro, K. Satbyul, P. Scheelbeek, J. Schwartz, D. Shindell, P. Shyamsundar, T. Taylor, C. Tonne, D. Van Vuuren, C. Wang, N. Watts, J. West, P. Wilkinson, S. Wood, J. Woodcock, A. Woodward, Y. Xie, Y. Zhang & K.L. Ebi (2020) Guidelines for modeling and reporting health effects of climate change mitigation actions, *Environmental Health Perspectives*, doi.org/10.1289/EHP6745.
29. D. Peters***, J.L. Schnell*, P.L. Kinney, V. Naik & D.E. Horton (2020) Public health and climate co-benefits and tradeoffs of U.S. vehicle electrification, *GeoHealth*, doi.org/10.1029/2020GH000275.
28. N.S. Diffenbaugh, C.B. Field, E. Appel, I. Azevedo, D. Baldocchi, M. Burke, J. Burney, P. Ciais, S.J. Davis, A.M. Fiore, S. Fletcher, T. Hertel, D.E. Horton, S. Hsiang, R.B. Jackson, X. Jin, M. Levi, D. Lobell, G.A. McKinley, F.C. Moore, A. Montgomery**, K.C. Nadeau, D. Pataki, J.T. Randerson, M. Reichstein, J.L. Schnell*, S.I. Seneviratne, D. Singh, A. Steiner & G. Wong-Parodi (2020) The

COVID-19 lockdowns: a window into the Earth System, *Nature Reviews Earth and Environment*, doi.org/10.1038/s43017-020-0079-1.

27. C. Deser, F. Lehner, K. Rodgers, T. Ault, T. Delworth, P. DiNezio, A. Fiore, C. Frankignoul, J. Fyfe, D.E. Horton, J.E. Kay, R. Knutti, N. Lovenduski, J. Marotzke, K. McKinnon, S. Minobe, J. Randerson, J.A. Screen, I.R. Simpson & M. Ting (2020) Insights from Earth system model initial-condition large ensembles and future prospects, *Nature Climate Change*, doi.org/10.1038/s41558-020-0731-2.
26. K.N. Braun***, E.J. Theuerkauf, M.T. Hurtgen, A.L. Masterson & D.E. Horton (2020) Loss-on-ignition estimates for soil organic carbon on a Great Lakes freshwater coastal wetland, *Wetlands*, doi.org/10.1007/s13157-020-01270-z.
25. Z. Liu, D.E. Horton, C. Tabor, B.B. Sageman, L.M.E. Percival, B.C. Gill & D. Selby (2019) Assessing the contributions of comet impact and volcanism toward the climate perturbations of the Paleocene-Eocene thermal maximum, *Geophysical Research Letters*, doi.org/10.1029/2019GL084818.
24. H. Chen**, E.T. Wolf, Z. Zhuchang & D.E. Horton (2019) Habitability and spectroscopic observability of warm M-dwarf exoplanets evaluated with 3D chemistry-climate models, *The Astrophysical Journal*, doi.org/10.3847/1538-4357/ab4f7e.
23. D. Touma, S. Stevenson, S.J. Camargo, D.E. Horton, & N.S. Diffenbaugh (2019) Variations in the intensity and spatial extent of tropical cyclone precipitation, *Geophysical Research Letters*, doi.org/10.1029/2019GL083452.
22. X. Tan, T.Y. Gan, S. Chen, D.E. Horton, X. Chen, B. Liu & K. Lin (2019) Trends in persistent seasonal-scale atmospheric circulation patterns responsible for seasonal precipitation totals and occurrences of precipitation extremes over Canada, *Journal of Climate*, doi.org/10.1175/JCLI-D-18-0401.1.
21. J.L. Schnell*, V. Naik, L.W. Horowitz, F. Paulot, P. Ginoux, M. Zhao & D.E. Horton (2019) Air quality impacts from the electrification of light-duty passenger vehicles in the United States, *Atmospheric Environment*, doi.org/10.1016/j.atmosenv.2019.04.003.
20. C.W. Callahan***, J.L. Schnell* & D.E. Horton (2019) Multi-index attribution of extreme winter air quality in Beijing, China, *Journal of Geophysical Research – Atmospheres*, doi.org/10.1029/2018JD029738.
19. K.N. Braun***, E.J. Theuerkauf, A.L. Masterson, B.B. Curry & D.E. Horton (2019) Modeling organic carbon loss from a rapidly eroding freshwater coastal wetland, *Scientific Reports*, doi.org/10.1038/s41598-019-40855-5.

18. H. Chen**, E.T. Wolf, S. Domagal-Goldman, R. Kopparapu & D.E. Horton (2018) Biosignature anisotropy modeled on temperate tidally-locked M-dwarf planets, *The Astrophysical Journal Letters*, doi.org/10.3847/2041-8213/aaebd2.
17. A. Sharma, A.F. Hamlet, H.J.S. Fernando, C.E. Catlett, D.E. Horton, V.R. Kotamarthi, D.A.R. Kristovich, A.I. Packman, J.L. Tank & D.J. Wuebbles (2018) The need for an integrated land-lake-atmosphere modeling system, exemplified by North America's Great Lakes region, *Earth's Future*, doi.org/10.1029/2018EF000870.
16. X. Tan, T.Y. Gan & D.E. Horton (2018) Projected timing of perceivable changes in climate extremes for terrestrial and marine ecosystems, *Global Change Biology*, doi.org/10.1111/gcb.14329.
15. D.L. Swain, D. Singh, D.E. Horton, J.S. Mankin, T. Ballard & N.S. Diffenbaugh (2017) Remote linkages to anomalous winter atmospheric ridging over the northeastern Pacific, *Journal of Geophysical Research – Atmospheres*, doi.org/10.1002/2017JD026575.
14. N.S. Diffenbaugh, D. Singh, J.S. Mankin, D.E. Horton, D.L. Swain, D. Touma, A. Charland, Y. Liu, M. Haugen, M. Tsiang & B. Rajaratnam (2017) Quantifying the influence of global warming on unprecedented extreme climate events, *Proceedings of the National Academy of Science*, doi.org/10.1073/pnas.1618082114.
13. S.H. Paull, D.E. Horton, M. Ashfaq, D. Rastogi, L.D. Kramer, N.S. Diffenbaugh & A.M. Kilpatrick (2017) Drought and immunity determine the intensity of West Nile virus epidemics and climate change impacts, *Proceedings of the Royal Academy B*, doi.org/10.1098/rspb.2016.2078.
12. D. Singh, D.L. Swain, J.S. Mankin, D.E. Horton, L.N. Thomas, B. Rajaratnam & N.S. Diffenbaugh (2016) Recent amplification of the North American winter temperature dipole, *Journal of Geophysical Research – Atmospheres*, doi.org/10.1002/2016JD025116.
11. D.L. Swain, D.E. Horton, D. Singh & N.S. Diffenbaugh (2016) Trends in atmospheric patterns conducive to seasonal precipitation and temperature extremes in California, *Science Advances*, doi.org/10.1126/sciadv.1501344.
10. D.E. Horton, N.C. Johnson, D. Singh, D.L. Swain, B. Rajaratnam & N.S. Diffenbaugh (2015) Contribution of changes in atmospheric circulation patterns to extreme temperature trends, *Nature*, doi.org/10.1038/nature14550.
9. C. Li, E. Sinha, D.E. Horton, N.S. Diffenbaugh & A.M. Michalak (2014) Joint bias correction of temperature and precipitation in climate model simulations, *Journal of Geophysical Research - Atmospheres*, doi.org/10.1002/2014JD022514.

8. D. Singh, D.E. Horton, M. Tsiang, M. Haugen, M. Ashfaq, R. Mei, D. Rastogi, N.C. Johnson, A. Charland, B. Rajaratnam & N.S. Diffenbaugh (2014) Severe precipitation in Northern India in June 2013: Causes, historical context, and changes in probability, in “Explaining Extremes of 2013 from a Climate Perspective”, *Bulletin of the American Meteorological Society*, 95(9), S58-61.
7. D.E. Horton, C.B. Skinner, D. Singh & N.S. Diffenbaugh (2014) Occurrence and persistence of future air stagnation events, *Nature Climate Change*, doi.org/10.1038/nclimate2272.
6. D.P. Lowry, C.J. Poulsen, D.E. Horton, T.H. Torsvik & D. Pollard (2014) Thresholds for Paleozoic ice sheet initiation, *Geology*, doi.org/10.1130/G35615.1.
5. D.E. Horton, Harshvadhan & N.S. Diffenbaugh (2012) Response of air stagnation frequency to anthropogenically enhanced radiative forcing, *Environmental Research Letters*, doi.org/10.1088/1748-9326/7/4/044034.
4. D.E. Horton, C.J. Poulsen, I.P. Montañez & W.A. DiMichelle (2012) Eccentricity-paced late Paleozoic climate change, *Palaeo-3*, doi.org/10.1016/j.palaeo.2012.03.014.
3. D.E. Horton, C.J. Poulsen & D. Pollard (2010) Influence of high-latitude vegetation feedbacks on late Palaeozoic glacial cycles, *Nature Geoscience*, doi.org/10.1038/NGEO922.
2. D.E. Horton & C.J. Poulsen (2009) Paradox of late Paleozoic glacioeustasy, *Geology*, 37, 715-718, doi.org/10.1130/G30016A.1.
1. D.E. Horton, C.J. Poulsen & D. Pollard (2007) Orbital and CO₂ forcing of late Paleozoic continental ice sheets, *Geophysical Research Letters*, doi.org/10.1029/2007GL031188.

- **EXTERNAL RESEARCH SUPPORT**

Mentorship key: undergraduate***, graduate**, or postdoc*

1. P. Hass (PI), E. Laflamme (Co-I) & D.E. Horton (Co-I) The Chicago Air Monitoring Dashboard: Integrating Air Sensor Data in Chicago to Enable Community Based Organizations to Advocate for Cleaner Air, EPA-G2024-STAR-D1, \$1.25M (\$240k to D.E.H.), (pending).
2. M. Heidarinejad (PI)...D.E. Horton (Sr. Pers.), CIVIC-PG Track A: Building Resilient Community-Led Infrastructure to Combat Extreme Heat Events, NSF, \$75k, (pending).
3. D.E. Horton (PI) S.F. Camilleri (Co-I), & A.I.B. Stathopoulos (Co-I) (2024) Roadmap for MHDV fleet renewal: Maximizing Health and Environmental Justice

Benefits in Air Pollution-Burdened Warehouse-Adjacent Communities, Health Effects Institute RFQ 24-1, \$443k, (awarded).

4. M. Clark (PI), J. West (Co-PI), J. Roering (Co-PI), D. Zekkos (Co-PI), B Yanites (Co-I), S. Moon (Co-I)... D.E. Horton (Sr. Pers.), Center for Land Surface Hazards (CLaSH), NSF Centers for Innovation and Community Engagement in Solid Earth Geohazards, \$15M (\$300k to D.E.H), (pending).
5. D.E. Horton (PI) (2024) Efficacy of vehicle emission control interventions in ameliorating air pollution exposure and health burdens in marginalized communities, Health Effects Institute RFQ 23-2, \$800k, (awarded)
6. D.E. Horton (2023) CAREER: CAS-Climate: Neighborhood-scale Assessment of the Air Quality Co-Benefits and Tradeoffs of Transportation Electrification, NSF Directorate of Engineering, Division of Chemical, Bioengineering, Environmental and Transport Systems, Programs in Environmental Engineering and Environmental Sustainability, \$600k, (awarded).
7. D.E. Horton (2022) Health and environmental justice benefits of reducing heavy duty vehicle NOx emissions, Environmental Defense Fund, \$154k (awarded).
8. Argonne National Lab, with NU subaward to A. Packman (PI), D.E. Horton (Co-I) & W. Miller (Co-I) (2022) Community Research on Climate and Urban Science (CROCUS), U.S. Department of Energy-Urban Field Lab, \$25M (awarded).
9. D.E. Horton (2021) Urban Climate Resilience and Hyper-Local Sensing, Microsoft Research, \$25k, (awarded).
10. S. van der Lee (PI)...D.E. Horton (Sr. Per.) et al (2021) HDR DSC: Collaborative Research: The Metropolitan Chicago Data Science Corps (MCDC): Learning from Data to Support Communities, NSF, \$2.37M (awarded).
11. D.E. Horton & H. Chen** (2019) Habitability and observational prospects of rocky exoplanets evaluated with 3D chemistry-climate models, NASA FINESST, \$135k (awarded).
12. G. Buscanera (PI), K. Daniels (Co-PI), A. Handwerger (Co-PI) & D.E. Horton (Co-PI) (2018) Defining precursors of ground failure: a multiscale framework for early landslide prediction through geomechanics and remote sensing, NSF PREEVENTS, \$1.45M (awarded).
13. A. Packman (PI), D.E. Horton (Co-PI), S.L. Young (Co-PI), M.H. Garcia (Co-PI) & S. Collis (Co-PI) (2018) RAISE: Systems Approaches for Vulnerable Evaluation and Urban Resilience (SAVEUR), NSF Convergence, \$1M (awarded).

14. C.B. Phillips*, A. Packman & D.E. Horton (2018) Effects of river flow variability and sediment dynamics on habitat stability under changing climate and hydropower development, The Nature Conservancy NatureNet Science Fellows Postdoctoral Research Grant, \$44.2k (awarded).

• **POST DOCTORAL AWARDS AND RECOGNITION**

Northwestern Nominee, Schmidt Science Polymath Award	2024
Appointed to NASEM <i>Committee on Communities, Climate Change, and Health Equity – Lessons Learned in Addressing Inequities in Heat-Related Climate Change Impacts</i>	2023
NSF CAREER Award	2023
Finalist, NU Fletcher Prize for Excellence in Research Mentorship	2021
Scialog Signatures of Life in the Universe Fellow (declined)	2020
NU Associated Student Government Faculty & Administrator Honor Roll	2018
<i>JGR-Atmospheres</i> Top 10 downloaded papers	2017
2016 Editor’s Citation for Excellence in Refereeing, <i>JGR-Atmospheres</i>	2017
AGU Congressional Visit Day – State of Illinois representative	2017
Hewlett Diversity Curriculum Fellow, Weinberg College, Northwestern University	2016
Outstanding Achievement in Mentoring, SEES, Stanford University	2015
ESI “Highly Cited Paper”, Horton et al. (2014)	2015
National Council of Grad. Schools-ProQuest Distinguished Dissertation Nominee	2012
UM Rackham Graduate School-ProQuest Distinguished Dissertation Award	2011

• **PRE-DOCTORAL AWARDS AND HONORS**

Outstanding Student Paper Award, American Geophysical Union	2010
Outstanding Graduate Student Instructor, UM, university-level	2009
Outstanding Graduate Student Instructor, UM, department-level	2009
Rocky Mountain Association of Geologists Veterans Scholarship	2007
Scott Turner Award in Earth Sciences, UM Dept of Geological Sciences	2007
Horace H. Rackham Research Grant, UM	2007
Departmental Fellowship, UM Dept of Geological Sciences	2006-2007
Commendation Medal, U.S. Air Forces in Europe	2004 & 2005
Distinguished Graduate, U.S. Air Force Combat Weather Course	2005
Basic Meteorology Scholarship, U.S. Air Force, Texas A&M University	2001-2002
ROTC Supplemental Academic Scholarship Award, Tulane University	1997-2001
U.S. Air Force Reserve Officer Training Corps Academic Scholarship	1996-2001

• **PROFESSIONAL TALKS**

Invited Research Seminars

1. Dept. of Earth & Environmental Sciences, University of Illinois at Chicago	2024
2. Illinois Primary Health Care Assoc./Alliance Chicago Ann. Leadership Conf.	2023
3. Chicago Area Patient-Centered Outcomes Research Network (CAPRICORN)	2023
4. Air & Waste Management Association, Lake Michigan States Section	2023

5. Dept. of Geography, University of Oregon	2023
6. Meridian 180 Forum, Ritsumeikan University, Japan	2023
7. Sustainability Week 2022, University of Michigan, Flint	2022
8. Dept. of Chemistry & Biochemistry, University of Wisconsin, Eau Claire	2021
9. National Association of State Energy Officials Annual Mtg.	2020
10. Kellogg Business School Behavioral Brownbag, Northwestern University, IL	2020
11. CLIVAR–Large Ensembles Working Group	2020
12. Climate Change Research Luncheon, Northwestern University, IL	2020
13. Dept. of Marine, Earth, & Atmospheric Sciences, N.C. State University	2020
14. Dept. of Geological & Environmental Sciences, Western Michigan University	2019
15. Dept. of Earth & Environmental Sciences, Tulane University	2018
16. Dept. of Civil & Environmental Engineering, Northwestern University, IL	2018
17. CLIVAR–Predictability, Predictions, and Applications Interface Panel	2018
18. CLIVAR–Large Ensembles Working Group	2018
19. Associated Colleges of the Chicago Area Spring Physics Seminar	2018
20. Environmental Law Colloquium, Pritzker School of Law, Northwestern U, IL	2018
21. Finite Earth Faculty Luncheon, Northwestern University, IL	2017
22. Dept. of Geological Sciences, Indiana University, IN	2016
23. Dept. of Earth & Environmental Sciences, University of Illinois at Chicago	2016
24. Carnegie Endowment for International Peace, Washington, DC	2016
25. Dept. of Civil & Environmental Engineering, Northwestern University, IL	2016
26. Institute for Sustainability and Energy at Northwestern University, IL	2016
27. Dept. of Geosciences, University of Wisconsin-Milwaukee, WI	2016
28. Understanding Global Change Workshop, Stanford University, CA	2015
29. Dept. of Earth & Planetary Sciences, Northwestern University, IL	2015
30. Dept. of Geography, Portland State University, OR	2014
31. Dept. of Environmental Earth System Science, Stanford University, CA	2014
32. Global Health Education Program, Stanford University School of Medicine, CA	2014
33. Atmosphere, Energy & Earth Division, Lawrence Livermore National Lab, CA	2014
34. Earth Day 2014: Connecting the Dots, Stanford University, CA	2014
35. Dept. of Civil & Environmental Engineering, Stanford University, CA	2014
36. School of Earth Sciences, Stanford University, CA	2013
37. Dept. of Geology, University of Cincinnati, OH	2012
38. Dept. of Earth Sciences, University of Memphis, TN	2012
39. Dept. of Earth Sciences, Dartmouth College, NH	2012
40. Synergistic Ocean-Atmosphere-Climate Seminar, U.C., Davis, CA	2011

Invited Academic Lectures

1. EMERG-3801, Feinberg School of Medicine, Northwestern University, IL	2024
2. ISEN-422, McCormick School of Engineering, Northwestern University, IL	2024
3. PPTYTORT-613, Pritzker School of Law, Northwestern University, IL	2023
4. CE-260, McCormick School of Engineering, Northwestern University, IL	2021
5. CE-260, McCormick School of Engineering, Northwestern University, IL	2018
6. JOUR-425, Medill School of Journalism, Northwestern University, IL	2017
7. EGL-102-001, English Dept., Oakton Community College, IL	2017
8. EGL-102-003, English Dept., Oakton Community College, IL	2017

9. EARTH-342, Weinberg College, Northwestern University, IL 2017
10. CE-260, McCormick School of Engineering, Northwestern University, IL 2017
11. PPTYTORT-613, Pritzker School of Law, Northwestern University, IL 2017
12. CE-361, McCormick School of Engineering, Northwestern University, IL 2016
13. EARTH-342, Weinberg College, Northwestern University, IL 2016
14. PPTYTORT-613, Pritzker School of Law, Northwestern University, IL 2016
15. CE-260, McCormick School of Engineering, Northwestern University, IL 2016
16. JOUR-425, Medill School of Journalism, Northwestern University, IL 2016

First-authored Conference Presentations

Mentorship key: high school****, undergraduate***, graduate**, or postdoc*

16. D.E. Horton (2023) Estimates of tract-level air quality in Chicago and the public health and equity implications of multi-modal vehicle electrification, AGU Fall Mtg.
15. D.E. Horton, S. Camilleri*, A. Montgomery**, M. Visa***, Z. Adelman, E.A. Grubert & S.C. Anenberg (2022) Air quality, public, health, and equity implications of electric vehicle adoption in Chicago, IL, AGU Fall Mtg.
14. D.E. Horton, A. Montgomery**, M. Visa***, G. Hauser**** & J.L. Schnell (2021) Assessing air quality co-benefits and tradeoffs of sustainable climate solutions, AGU Fall Mtg., doi.org/10.1002/essoar.10508580.1.
13. D.E. Horton, J.L. Schnell, D.R. Peters, D.C. Wong, X. Lu, H. Gao, H. Zhang & P.L. Kinney (2021) Effect of adoption of electric vehicles on public health and air pollution in China: a modelling study, Planetary Health Annual Mtg., *The Lancet Planetary Health*, doi.org/10.1016/S2542-5196(21)00092-9.
12. D.E. Horton, J.L. Schnell*, A. Montgomery**, A.L. Rogin***, D.R. Peters***, C. Cai***, D. Goldstein*** & K. Srinivasan***** (2019) Decision-tools for informed EV adoption and co-benefit/tradeoff analyses, AGU Fall Mtg.
11. D.E. Horton, C. Callahan*** & J.L. Schnell* (2019) Multi-index attribution of the meteorology behind Beijing's poor air quality events, CLIVAR Large Ensembles Workshop, Boulder, CO.
10. D.E. Horton, J.L. Schnell*, Y. Suo** & C. Callahan*** (2017) Meteorological drivers of extreme air pollution events, AGU Fall Mtg.
9. D.E. Horton, J.S. Mankin, D. Singh, D.L. Swain & N.S. Diffenbaugh (2016) Cluster classification of mid-latitude summer circulation patterns in the CESM1 Large Ensemble, AGU Fall Mtg.
8. D.E. Horton, J.S. Mankin, D. Singh, D.L. Swain, N.C. Johnson & N.S. Diffenbaugh (2015) Probability of atmospheric circulation pattern occurrence in pre-industrial, historical, and future climates, AGU Fall Mtg.

7. D.E Horton, D. Singh, D.L. Swain & N.S. Diffenbaugh (2014) Surface temperature extremes and detectable trends in northern hemisphere mid-tropospheric planetary wave pattern occurrence and persistence, AGU Fall Mtg.
6. D.E Horton & N.S. Diffenbaugh (2013) Occurrence and persistence of air stagnation events in current and future forcing regimes, AGU Fall Mtg.
5. D.E Horton, A.M. Kilpatrick, J. Ruybal & N.S. Diffenbaugh (2012) The evolution of disease vectors in a warming world: mosquitoes, incubators, and CMIP5 temperature projections, AGU Fall Mtg.
4. D.E Horton, C.J. Poulsen & T.H. Torsvik (2011) Paleozoic ice sheet inception; a study of paleogeographic sensitivity, AGU Fall Mtg.
3. D.E Horton, Harshvardhan & N.S. Diffenbaugh (2011) Future changes in air stagnation frequency; a global perspective, AGU Fall Mtg.
2. D.E Horton & C.J. Poulsen (2010) High-latitude ecosystem change enables late Paleozoic glacial-interglacial cycles, AGU Fall Mtg.
1. D.E Horton, C.J. Poulsen & D. Pollard (2007) Simulations of late Paleozoic continental ice sheets under orbital and CO₂ forcing, AGU Fall Mtg.

Co-authored Conference Presentations

Mentorship key: high school****, undergraduate***, graduate**, or postdoc*

Candidate's name underlined and last indicates candidate is the senior author or PI

105. V.A. Lang**, S.F. Camilleri*, S. van der Lee, G. Rowangould, B. Antonczak, T. Thompson, M. Harris, C. Harkins, D. Tong, M. Janssen, Z. Adelman & D.E. Horton (2025) Intercomparison of modeled urban-scale vehicle emissions – Implications for exposure and equity assessments, Transportation Review Board Annual Mtg.
104. K. Shiplak***, S.F. Camilleri* & D.E. Horton (2024) Contribution of U.S. residential wood combustion to winter PM_{2.5} concentrations and an exploration of mitigation benefits, AGU Fall Mtg.
103. V.A. Lang**, S.F. Camilleri*, M. Janssen & D.E. Horton (2024) Leveraging machine learning to improve the characterization of heavy-duty vehicle idling activity for emission modeling applications, AGU Fall Mtg.
102. A.E. Sinclair**, N.S. Oakley & D.E. Horton (2024) Uncertainty among hourly precipitation estimates for shallow landslide and debris flow events in southern California, AGU Fall Mtg.
101. C.B. Phillips, A. Sigman, J. Gardner, D.E. Horton & A.I. Packman (2024) River

self-organization enables the prediction of watershed fine particle yields, AGU Fall Mtg.

101. V.A Lang**, S.F. Camilleri*, N. Deylami, M.H. Harris, L. Koehler, B. Urbaszewski & D.E. Horton (2024) Assessing the efficacy of an Advanced Clean Truck policy to improve air quality, public health, and environmental injustices in the Greater Chicago region, Air and Waste Management Environmental Justice Policy, Practice, and Progress Conference.
100. A.E. Sinclair**, A.J. West, M.K. Clark & D.E. Horton (2024) Uncertainty in Precipitation observations, hindcasts, and forecasts over southern California for post-Tropical storm Hilary, California Fire Science Consortium, Establishing Directions in Postfire Debris Flow Science.
99. C. Li**, A.L. Handwerger & D.E. Horton (2024) Modeling and remote sensing of postfire debris-flow susceptibility at regional scales, California Fire Science Consortium, Establishing Directions in Postfire Debris Flow Science.
98. B.W. Barrett, P.M. Graffy, D.E. Horton & A. Kho (2024) Daymet and DeGauSS: Development of a novel method that links high spatial resolution gridded meteorological data with geocoded healthcare encounters, International Population Data Linkage Network Conference.
97. S.F. Camilleri*, A. Montgomery, M. Visa, J.L. Schnell, Z. Adelman, M. Janssen, E.A. Grubert, S.C. Anenberg & D.E. Horton (2024) Air quality, health and equity impacts of transport electrification in the U.S. Midwest, EGU Annual Mtg.
96. P.M. Graffy, A. Sunderraj, M.A. Visa, C. Miller, B. Barrett, S. Rao, S.F. Camilleri*, R.D. Harp, C. Li**, A. Brenneman, A. Kho, D.E. Horton & N.B. Allen (2024) Methodological approaches for cardiovascular disease heat impact studies: a global scoping review, American Heart Association EPI Lifestyle Mtg.
95. V. Lang**, C. Harkins, G. Rowangould, S. van der Lee, B. Antonczak & D.E. Horton (2023) Modeled on-road NO_x emissions intercomparison: FIVE v. LADCO v. NEMO v. UVM, AGU Fall Mtg.
94. A. Ocampo***, C. Li**, T. Olsen, A. Pfeiffer & D.E. Horton (2023) One-way coupled post-fire debris flow modeling using WRF-Hydro and RAMMS, AGU Fall Mtg.
93. A. Montgomery**, S.F. Camilleri* & D.E. Horton (2023) CTM-based estimates of exposure and health in Chicago air pollution, AGU Fall Mtg.
92. C. Li**, G. Yu, J. Wang & D.E. Horton (2023) Improved soil moisture simulations across complex terrain in central California using state-of-the-science soil parameter

estimates, AGU Fall Mtg.

91. C. Li**, A.L. Handwerger & D.E. Horton (2023) Probabilistically hindcasting California's hydro-geomorphic hazards triggered by the parade of atmospheric rivers in January 2023, AGU Fall Mtg.
90. S.F. Camilleri*, G. Kerr, S.C. Anenberg, M. Harris & D.E. Horton (2023) Inequitable all-cause NO₂-attributable mortality burdens across racial and ethnic population subgroups in the U.S., AGU Fall Mtg.
89. C. Li**, A.L. Handwerger & D.E. Horton (2023) Modeling and Remote Sensing of Postfire Debris-flow susceptibility at regional scales, Geological Society of America Annual Mtg.
88. B.B. Sageman, M.M. Jones, M.A. Arthur, I. Niezgodzki & D.E. Horton (2023) Controls on organic carbon burial in the late Cenomanian Plenus Western Interior Seaway, Geological Society of America Annual Mtg.
87. V.A. Lang**, S.F. Camilleri*, A. Montgomery**, Z. Adelman, M. Janssen, M.H. Harris & D.E. Horton (2023) Characterizing air quality and health impacts of heavy-duty vehicle idling in warehouse settings using neighborhood-scale WRF-CMAQ simulations, International Society of Exposure Science Annual Mtg.
86. S.F. Camilleri*, A. Montgomery**, M. Visa***, J.L. Schnell*, Z. Adelman, M. Janssen, E.A. Grubert, S.C. Anenberg, M.H. Harris & D.E. Horton (2023) Neighborhood-scale air quality and health impacts associated with electrifying heavy-duty vehicles in the U.S. Midwest, International Society of Exposure Science Annual Mtg.
85. V. Desai, C. Li**, D.E. Horton, A.L. Handwerger & K.E. Daniels (2022) Soil moisture and displacement data forecast the fate of creeping landslides via multilayer networks, AGU Fall Mtg.
84. R.D. Harp* & D.E. Horton (2022) Observed changes in daily and interannual precipitation variability in the United States, AGU Fall Mtg.
83. S. Camilleri*, A. Montgomery**, M. Visa***, J.L. Schnell*, Z. Adelman, M. Janssen, E.A. Grubert, S.C. Anenberg & D.E. Horton (2022) Neighborhood-scale air quality and health impacts associated with electrifying heavy-duty vehicles in the U.S. Midwest
82. M. Visa***, A. Montgomery**, S. Camilleri*, J.L. Schnell*, M. Janssen, Z. Adelman, S.C. Anenberg, E.A. Grubert & D.E. Horton (2022) Neighborhood-scale air quality and health impacts from EV adoption in the U.S. Midwest, AGU Fall Mtg.
81. C. Li**, A.L. Handwerger & D.E. Horton (2022) Developing hydrometeorological

landslide thresholds in California using WRF-Hydro hindcast simulations and radar-constrained precipitation data, AGU Fall Mtg.

80. A. Montgomery**, M. Daepf, M. Abdin, P. Choudry, S. Malvar, S. Counts & D.E. Horton (2022) Intraurban NO₂ hotspot detection via clustering of in-situ, remote, and modeled air quality data products, AGU Fall Mtg.
79. B.B. Sageman, M.M. Jones, M.A. Arthur, I. Niezgodzki & D.E. Horton (2022) Late Cenomanian Plenus event in the Western Interior Seaway, Cretaceous Symposium, Warsaw, PL.
78. M. Visa***, A. Montgomery**, S.F. Camilleri*, J.L. Schnell* & D.E. Horton (2022) Air quality benefits and tradeoffs from vehicle electrification in the U.S. Midwest, Planetary Health Annual Mtg.
77. S.F. Camilleri*, A. Montgomery**, M. Visa***, J.L. Schnell* & D.E. Horton (2022) The air quality and health implications of transitioning 30% of the U.S. Midwest heavy-duty transport fleet from diesel to electric power, Planetary Health Annual Mtg.
76. C. Li**, A.L. Handwerger, J. Wang & D.E. Horton (2022) Modeling of AR-induced post-wildfire debris flow susceptibility in California, U.S.A., Asia Oceania Geosciences Society Annual Mtg.
75. C. Li**, G. Yu, J. Wang, X. Liang, A.L. Handwerger, G. Buscarnera & D.E. Horton (2022) A novel soil moisture calibration scheme for WRF-Hydro and its application in slow-moving landslide studies, AGU Frontiers in Hydrology Mtg.
74. R.J. Cronk***, M.S. Bryan, A. Montgomery**, M. Kolak & D.E. Horton (2022) Investigating relationships between asthma mortalities, environmental factors, and social determinants in Chicago, Society for Epidemiologic Research Annual Mtg. 2022.
73. J.M. Garrido-Perez, C. Ordóñez, D. Barriopedro, R. García-Herrera, J.L. Schnell* & D.E. Horton (2022) A storyline view of the projected role of remote drivers on summer air stagnation in Europe and the United States, EGU General Assembly 2022.
72. H. Luo, S.M. Collis, I.A. Crisologo, D.E. Horton, A.I. Packman & M.H. Garcia (2022) Prediction of urban flooding risks using high-resolution modeling and hybrid rainfall data, 39th International Association for Hydro-environment Engineering and Research World Congress.
71. R.D. Harp*, & D.E. Horton (2022) Observed changes in precipitation seasonality and timing, American Meteorological Society Annual Mtg.

70. R.D. Harp*, & D.E. Horton (2021) Patterns in human mobility responses to weather and climate, AGU Fall Mtg.
69. R.D. Harp*, & D.E. Horton (2021) Quantifying observed changes in global precipitation variability and extremes, AGU Fall Mtg.
68. D. Blanco***, R.D. Harp* & D.E. Horton (2021) Observing changes in the Great Lakes water level variability, AGU Fall Mtg.
67. C. Li**, A.L. Handwerger, J. Wang, W. Yu, X. Li, G. Buscarnera & D.E. Horton (2021) Use of WRF-Hydro to simulate runoff-generated debris flow hazards in burn scars, AGU Fall Mtg.
66. A. Montgomery**, J.L. Schnell*, M. Janssen, Z. Adelman & D.E. Horton (2021) A multi-platform approach to characterizing and mitigating urban air quality in Chicago, AGU Fall Mtg.
65. G.M. Hauser***, M.A. Visa***, A. Montgomery, J.L. Schnell* & D.E. Horton (2021) Constraining the climate and air quality co-benefits of an LED lighting transition, AGU Fall Mtg.
64. M. Visa***, A. Montgomery**, G.M. Hauser***, J.L. Schnell*, M. Janssen, Z. Adelman & D.E. Horton (2021) Air quality benefits and tradeoffs from 30% light-duty vehicle electrification over the Midwest-Great Lakes Region, AGU Fall Mtg.
63. H. Chen** & D.E. Horton (2021) The 3D effects of large stellar flares on habitable zone planets, AGU Fall Mtg.
62. H. Chen**, Y. Luo & D.E. Horton (2021) Caveats for the Water-Loss Limit at the Inner Edge of the Habitable Zone, AGU Fall Mtg.
61. A. Montgomery**, J.L. Schnell*, A.L. Rogin & D.E. Horton (2021) Co-benefits of electrifying Chicago's municipal vehicle fleet, Nature Research Conferences: Sustainable Solutions for Pollution Control.
60. R.D. Harp*, J.M. Colborn, K.B. Karnauskas, B. Candrinho, K.L. Colborn, L. Zhang & D.E. Horton (2021) Towards using climate to increase lead time of a malaria early warning system in Mozambique, Planetary Health Annual Mtg., *The Lancet Planetary Health*, doi.org/10.1016/S2542-5196(21)00088-7.
59. A. Montgomery**, J.L. Schnell*, A.L. Rogin & D.E. Horton (2021) Health benefits of electrifying Chicago's municipal vehicle fleet, Planetary Health Annual Mtg., *The Lancet Planetary Health*, doi.org/10.1016/S2542-5196(21)00105-4.
58. H. Chen**, M. Mendillo, J.C. Becker & D.E. Horton (2020) On the ionospheres of strongly- to weakly-oxygenated exoplanets, AGU Fall Mtg.

57. R.D. Harp*, J.M. Colborn, K.B. Karnauskas, B. Candrinho, K.L. Colborn, L. Zhang & D.E. Horton (2020) Toward using climate to increase lead-time of a malaria early warning system in Mozambique, AGU Fall Mtg.
56. I. Crisologo*, S. Collis & D.E. Horton (2020) Climatological analysis of melting layer altitude in landfalling atmospheric rivers using weather radars, AGU Fall Mtg.
55. A. Montgomery**, J.L. Schnell*, A.L. Rogin*** & D.E. Horton (2020) Characterization and mitigation strategies for Chicago air quality, AGU Fall Mtg.
54. C.B. Phillips*, C.A. Rogéliz, D.E. Horton, J. Higgins & A.I. Packman (2020) River channel and watershed self-organization limit the flux of fine particles, AGU Fall Mtg.
53. I. Crisologo*, H. Luo, D.E. Horton, G. Buscarnera, M.H. Garcia & S. Collis (2020) Characterization of uncertainties in high-resolution rainfall retrieval for small catchments, European Conference on Radar in Meteorology and Hydrology, Mtg Canceled due to COVID-19.
52. C.B. Phillips*, C.A. Rogéliz, D.E. Horton, J. Higgins & A.I. Packman (2020) Landscape and river self-organization limit the flux of fine particles, EGU Annual Mtg.
51. H. Chen**, Z. Zhuchang, E.T. Wolf, A. Youngblood, A. Feinstein & D.E. Horton (2020) Influence of Large Stellar Flares on Magnetized and Unmagnetized Tidally-locked Rocky Exoplanets, Asia-Oceania Geosciences Society, Hongcheon, South Korea, Mtg Canceled due to COVID-19.
50. H. Chen**, Z. Zhuchang, E.T. Wolf, A. Youngblood, A. Feinstein & D.E. Horton (2020) Influence of Large Stellar Flares on Magnetized and Unmagnetized Tidally-locked Rocky Exoplanets, Exoplanets III, Heidelberg, DE, Mtg Canceled due to COVID-19.
49. D. Goldstein***, K. Srinivasan****, J.L. Schnell* & D.E. Horton (2020) Consumer-targeted electric v. internal combustion vehicle emissions calculator, International Symposium on Sustainable Systems and Technology, Pittsburgh, PA, Mtg Canceled due to COVID-19.
48. J. Wang, I. Crisologo*, S. Collis, D.E. Horton & G. Buscarnera (2020) High resolution precipitation retrieval for hydrological modeling including WRF-hydro and land failure models over California, USA, Weather Radar and Hydrology, Nanjing, China, Mtg Canceled due to COVID-19.
47. D.E. Lawson, A.E. Nesbitt, B. Whitehouse, D.E. Horton, M.N. Peterson, K.T. Stephenson & D.J. Wuebbles (2020) Using local examples of wildlife climate

- adaptation to start a nationwide dialog on climate change one state at a time, AMS Annual Mtg.
46. D. Touma, S. Stevenson, S.J. Camargo, D.E. Horton & N.S. Diffenbaugh (2020) Variations in the intensity and spatial extent of tropical cyclone precipitation, AMS Annual Mtg.
 45. M.J. Potosnak, P. Banerjee, M.B. Berkelhammer, R. Sankaran, V.R. Kotamarthi, R.L. Jacob, P.H. Beckman, S. Shahkarami, D.E. Horton, A. Montgomery** & C.E. Catlett (2019) Array of Things: A high-density, urban deployment of low-cost air quality sensors, AGU Fall Mtg.
 44. I. Crisologo*, H. Luo, A. Medendorp, M.H. Garcia, S. Collis & D.E. Horton (2019) Using high-resolution radar rainfall products to improve city-scale flood models for urban resilience, AGU Fall Mtg.
 43. H. Luo, I. Crisologo*, D.E. Horton, M.H. Garcia, S. Collis & A.I. Packman (2019) A Revisit of Temporal and Spatial Variability and Resolution of Rainfall Measurements Relevant for Urban Hydrology, AGU Fall Mtg.
 42. J.L. Schnell*, D.R. Peters***, D. Wong, X. Lu, H. Zhang, H. Gao & D.E. Horton (2019) Air quality and human health impacts from electric vehicle adoption in Chinese megacities, AGU Fall Mtg.
 41. A. Montgomery**, J.L. Schnell* & D.E. Horton (2019) A multiplatform characterization of urban air quality at neighborhood scales: A Chicago Case Study, AGU Fall Mtg.
 40. A.L. Rogin***, J.L. Schnell*, A. Montgomery** & D.E. Horton (2019) Air quality and health impacts of electrifying Chicago's municipal vehicle fleet, AGU Fall Mtg.
 39. C.B. Phillips*, C.A. Rogéliz, D.E. Horton, J. Higgins & A.I. Packman (2019), A combined physics and data-driven approach for predicting suspended sediment dynamics in river networks, AGU Fall Mtg.
 38. L.L. Yang***, N.J.C. Zerenga & D.E. Horton (2019) Breadfruit (*Artocarpus altilis*) range suitability and adaptation potential under divergent climate pathways, AGU Fall Mtg.
 37. H. Chen**, E.T. Wolf, Z. Zhuchang & D.E. Horton (2019) Habitability and Observability of strongly to weakly oxygenated M-dwarf exoplanets constrained by 3D chemistry-climate models, AGU Fall Mtg.
 36. H. Chen**, E.T. Wolf, R. Kopparapu, S. Domagal-Goldman, Z. Zhuchang & D.E. Horton (2019) M-dwarf activity driven 3D climate and photochemistry of inner

habitable zone tidally-locked rocky planets, AAS Extreme Solar Systems IV, Reykjavik, Iceland.

35. D. Touma, S. Stevenson, S.J. Camargo, D.E. Horton & N.S. Diffenbaugh (2019) Variations in the intensity and spatial extent of tropical cyclone precipitation, Workshop on Risk Analysis for Extremes in the Earth System, Lawrence Berkeley Laboratory.
34. C.B. Phillips*, C.A. Rogéliz Prada, D.E. Horton & A.I. Packman (2019), Exploring the signature of climate, catchment, and internal variability on river suspended sediment dynamics, Catchment Sciences, Gordon Research Conference.
33. H. Chen**, E.T. Wolf, Z. Zhuchang & D.E. Horton (2019) Coupled 3D chemistry-climate simulations of moist greenhouse terrestrial planets: water-loss and spectroscopic observability, AbSciCon.
32. C.B. Phillips*, C.A. Rogéliz Prada, D.E. Horton & A.I. Packman (2019) Deciphering the role of autogenic processes on the dynamics of fine particle transport in mountain streams, EGU Annual Mtg.
31. C.B. Phillips*, D.E. Horton & A.I. Packman (2018) Exploring the signature of climate and internal variability on river suspended sediment dynamics, AGU Fall Mtg.
30. K.N. Braun***, E.J. Theuerkauf, A.L. Masterson, B.B. Curry & D.E. Horton (2018) Quantifying carbon budgets deficits from a rapidly eroding freshwater coastal wetland, Lake Michigan, USA, AGU Fall Mtg.
29. H. Chen**, E.T. Wolf, S. Domagal-Goldman, R. Kopparapu & D.E. Horton (2018) Global biosignature distributions on temperate tidally-locked planets orbiting M-dwarfs simulated with a 3-D chemistry climate model, AGU Fall Mtg.
28. D.R. Peters***, J. Schnell* & D.E. Horton (2018) Modeling public health impacts of air quality changes caused by electric vehicle adoption scenarios in the U.S. and China, AGU Fall Mtg.
27. J. Thompson**, S. van der Lee, & D.E. Horton (2018) Analysis of very long-period noise at flexible-array stations in the North-American midcontinent, AGU Fall Mtg.
26. J. Schnell*, V. Naik, L.W. Horowitz, F. Paulot, P. Ginoux, M. Zhao & D.E. Horton (2018) Air quality impacts from the electrification of light duty passenger vehicles in the United States, AGU Fall Mtg.
25. D. Touma, D.E. Horton, S. Camargo & N.S. Diffenbaugh (2018) Quantifying the historical intensity and spatial extent of extreme tropical cyclone precipitation, AGU Fall Mtg.

24. Y. Suo** & D.E. Horton (2018) Drivers of seasonal variability of atmospheric stagnation features under anthropogenic forcing using a climate model ensemble (CMIP5), Northwestern University Computational Research Day.
23. H. Chen** & D.E. Horton (2018) Modeled 3-D biosignatures from the stratosphere of Proxima Centauri b and M-dwarf planets, Northwestern University Computational Research Day.
22. C. Callahan*** & D.E. Horton (2018) Multi-index attribution of Beijing's 2013 airpocolypse, Northwestern University Computational Research Day.
21. K.N. Braun***, E.J. Theuerkauf, A.L. Masterson & D.E. Horton (2018) Quantifying the annual carbon budget from a rapidly eroding coastal freshwater wetland using field and model data, GSA North-Central Annual Mtg.
20. H. Chen** & D.E. Horton (2018) Modeled 3-D biosignatures from the stratosphere of Proxima Centauri b and M-dwarf planets, AAS Winter Mtg.
19. C. Callahan***, D.E. Horton, N.S. Diffenbaugh (2017) Multi-index attribution of Beijing's 2013 airpocolypse, AGU Fall Mtg.
18. H. Chen** & D.E. Horton (2017) The importance of volcanic sulfate aerosols on decadal-scale climate projections, Northwestern University Computational Research Day.
17. D.L. Swain, D. Singh, D.E. Horton, J.S. Mankin, T. Ballard, L.N. Thomas & N.S. Diffenbaugh (2016) Connections between the tropical Pacific Ocean, Arctic sea ice, and anomalous northeastern Pacific ridging, AGU Fall Mtg.
16. D. Singh, D.L. Swain, J.S. Mankin, D.E. Horton, L.N. Thomas, B. Rajaratnam & N.S. Diffenbaugh (2016) Recent amplification of the North American winter temperature dipole, AGU Fall Mtg.
15. C. Li, A.M. Michalak, E. Sinha, D.E. Horton & N.S. Diffenbaugh (2016) Joint bias correction of temperature and precipitation in climate model simulations, International Mtg. on Statistical Climatology.
14. D. Singh, D.L. Swain, J.S. Mankin, D.E. Horton, L.N. Thomas & N.S. Diffenbaugh (2016) Historical trends in the North American winter temperature dipole, associated atmospheric mechanisms and links to anthropogenic forcing, EGU General Assembly.
13. N.S. Diffenbaugh, D.E. Horton, D. Singh, D.L. Swain, D. Touma & J.S. Mankin (2015) Using atmospheric circulation patterns to detect and attribute changes in the risk of extreme climate events, AGU Fall Mtg.

12. D.L. Swain, D.E. Horton, D. Singh & N.S. Diffenbaugh (2015) Trends in persistent seasonal-scale atmospheric circulation patterns responsible for precipitation and temperature extremes in California, AGU Fall Mtg.
11. D. Singh, D.E. Horton & N.S. Diffenbaugh (2015) Influence of anthropogenic warming on extremes in the Indian summer monsoon using cluster analysis, AMS Annual Mtg.
10. J.P. Matthys*, D.E. Horton & N.S. Diffenbaugh (2014) Meteorological influences on extreme duration PM_{2.5} air pollution episodes, AGU Fall Mtg.
9. D. Singh, D.E. Horton & N.S. Diffenbaugh (2014) Understanding the dynamic and thermodynamic causes of historical trends in the intraseasonal variability of the south Asian summer monsoon, AGU Fall Mtg.
8. N.S. Diffenbaugh, B. Rajaratnam, A. Charland, M. Haugen, D.E. Horton, D. Singh, D.L. Swain & M. Tsiang (2014) Quantifying the influence of observed global warming on the probability of unprecedented extreme climate events, AGU Fall Mtg.
7. C. Li, A.M. Michalak, E. Sinha, D.E. Horton & N.S. Diffenbaugh (2014) Joint bias correction of temperature and precipitation in climate model simulations, AGU Fall Mtg.
6. S.H. Paull, D.E. Horton, N.S. Diffenbaugh & A.M. Kilpatrick (2014) Climate and immunity as drivers of interannual variability of human West Nile virus cases, ESA Annual Convention.
5. D.P. Lowry, D.E. Horton, C.J. Poulsen, T.H. Torsvik & D. Pollard (2013) Controls on ice sheet initiation during the Paleozoic, GSA Annual Mtg.
4. D.E. Ibarra, K. Maher, J.L. Oster, A.E. Egger, C.R. Harris, D.E. Horton & K.L. Weaver (2012) Comparing lake and soil records to climate model simulations of hydrologic conditions across the western U. S. at the LGM, AGU Fall Mtg.
3. I.P. Montañez, U. Brand, C.J. Poulsen & D.E. Horton (2011) Climate-forcing and feedbacks of the Late Paleozoic Ice Age, AGU Fall Mtg.
2. S.M. Bates, T.W. Lyons, I.P. Montañez, C.J. Poulsen & D.E. Horton (2011) Coupled conodont $\delta^{18}\text{O}$, phosphate, climate model, and stratigraphic perspectives on carboniferous cyclic deposits from mid-continent North America, AGU Fall Mtg.
1. C.J. Poulsen, D.E. Horton & D. Pollard (2007) Glacial-Interglacial climate change during the late Paleozoic: A climate modeling perspective, GSA Annual Mtg.

• **OTHER MATTERS RELATED TO RESEARCH AND PUBLICATION**

1. Op-Ed: D.E. Horton, S.K. Rao, N. Davis, R. Mansour & K. Woods (2023) To prepare for extreme heat, let's collaborate and learn from our communities, Chicago Sun-Times, 21 June 2023, <https://chicago.suntimes.com/2023/6/21/23768408/extreme-heat-weather-climate-change-environment-heat-watch-chicago-northwestern-op-ed>.
2. Op-Ed: D.J. Hillis, D.E Horton, R. Loureiro, K. Pependorf, C. Downs, R.E. Doel, T.P. Clement & A. Kobelski (2018) *YOU* Should Advocate for Science, *EOS*. 99, <https://doi.org/10.1029/2018EO097137>.
 - a. Op-ed based on 2017 Congressional Visit Day sponsored by AGU.
3. Original Artwork: D.E Horton (2018) Anthropocene, *Flint Magazine*, eds. B. Gaydos & M. Asshaq.
 - a. Flint Magazine is a multimedia magazine featuring the work of over 20 international contributors: artists, writers, filmmakers, and designers. Anthropocene: "Directions: Fill out form. Take outside. Place under rock. Forget." Custom etched poly-vinyl, guaranteed to live in the ground for millennia. Words / concept by Daniel Horton, Northwestern University.
4. Book Review: D.E Horton (2014) Review of “*Palaeozoic Climate Cycles: Their Evolutionary and Sedimentological Impact*” Geological Society London, Special Publications, 376, by A. Gąsiewicz & M. Słowakiewicz (eds), in *Geologos*, 20, 310-311.