

BRENDAN M. ROGERS

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Dr. Rogers' research focuses on how terrestrial ecosystems are responding to climate change and land use, how this feeds back to climate change, and how management and policy can be used for climate mitigation and adaptation. He primarily focuses on the boreal forests and arctic tundra across Alaska, Canada, and Siberia, where rapid climate change is altering ecosystems, thawing permafrost, and intensifying disturbance regimes such as wildfire. Dr. Rogers uses a combination of field observations, remote sensing, and modeling techniques to conduct science for societal and policy impact.

EDUCATION

University of California, Irvine, CA | Ph.D. in Earth System Science | March 2014

Thesis: *Toward a better understanding of boreal forest fires and their role in the climate system.*

University of California, Irvine, CA | Masters of Science in Earth System Science | October 2011

Oregon State University, Corvallis, OR | Masters of Science in Environmental Sciences | August 2009

Thesis: *Potential impacts of climate change on vegetation distributions, carbon stocks, and fire regimes in the U.S. Pacific Northwest.*

Hamilton College, Clinton, NY | Bachelors of Arts in Mathematics; minor in Biology | May 2003

RELEVANT PROFESSIONAL EXPERIENCE

Associate Scientist | Woodwell Climate Research Center | May 2020 - present

Assistant Scientist | Woods Hole Research Center | Apr 2016 – May 2020

Postdoctoral Fellow | Woods Hole Research Center | Apr 2014 – Apr 2016

PUBLICATIONS

2025

- Frost, G. V., Bhatt, U. S., Macander, M. J., Berner, L. T., Walker, D. A., Raynolds, M. K., Magnússon, R. Í., Bartsch, A., Bjerke, J. W., Epstein, H. E., Forbes, B. C., Goetz, S. J., Hoy, E. E., Karlsen, S. R., Kumpula, T., Lantz, T. C., Lara, M. J., López-Blanco, E., Montesano, P. M., Neigh, C. S. R., Nitze, I., Orndahl, K. M., Park, T., Phoenix, G. K., Rocha, A. V., **Rogers, B. M.**, Schaepman-Strub, G., Tømmervik, H., Verdonen, M., Veremeeva, A., Virkkala, A.-M., and Waigl, C. F.: The changing face of the Arctic: four decades of greening and implications for tundra ecosystems, *Front. Environ. Sci.*, 13, 1525574, <https://doi.org/10.3389/fenvs.2025.1525574>, 2025.
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- Matthes, H., Damseaux, A., Westermann, S., Beer, C., Boone, A., Burke, E., Decharme, B., Genet, H., Jafarov, E., Langer, M., Parmentier, F.-J., Porada, P., Gagne-Landmann, A., Huntzinger, D., **Rogers, B. M.**, Schädel, C., Stacke, T., Wells, J., and Wieder, W. R.: Advances in Permafrost Representation: Biophysical Processes in Earth System Models and the Role of Offline Models, *Permafrost and Periglacial Processes*, <https://doi.org/10.1002/ppp.2269>, 2025.
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- Virkkala, A.-M., **Rogers, B. M.**, Watts, J. D., Arndt, K. A., Potter, S., Wargowsky, I., Schuur, E. A. G., See, C. R., Mauritz, M., Boike, J., Bret-Harte, M. S., Burke, E. J., Burrell, A., Chae, N., Chatterjee, A., Chevallier, F., Christensen, T. R., Commane, R., Dolman, H., Edgar, C. W., Elberling, B., Emmerton, C. A., Euskirchen, E. S., Feng, L., Göckede, M., Grelle, A., Helbig, M., Holl, D., Järveoja, J., Karsanaev, S. V., Kobayashi, H., Kutzbach, L., Liu, J., Luijckx, I. T., López-Blanco, E., Lunneberg, K., Mammarella, I., Marushchak, M. E., Mastepanov, M., Matsuura, Y., Maximov, T. C., Merbold, L., Meyer, G., Nilsson, M. B., Niwa, Y., Oechel, W., Palmer, P. I., Park, S.-J., Parmentier, F.-J. W., Peichl, M., Peters, W., Petrov, R., Quinton, W., Rödenbeck, C., Sachs, T., Schulze, C., Sonnentag, O., St. Louis, V. L., Tuittila, E.-S., Ueyama, M., Varlagin, A., Zona, D., and Natali, S. M.: Wildfires offset the increasing but spatially heterogeneous Arctic–boreal CO₂ uptake, *Nature Climate Change*, 1–8, <https://doi.org/10.1038/s41558-024-02234-5>, 2025.
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- Talucci, A., Loranty, M. M., Holloway, J. E., **Rogers, B. M.**, Alexander, H. D., Baillargeon, N., Baltzer, J. L., Berner, L. T., Breen, A., Brodt, L., Buma, B., Dean, J., Delcourt, C. J. F., Diaz, L. R., Dieleman, C. M., Douglas, T. A., Frost, G. V., Gaglioti, B. V., Hewitt, R. E., Hollingsworth, T., Jorgenson, M. T., Lara, M. J., Loehman, R. A., Mack, M. C., Manies, K. L., Minions, C., Natali, S. M., O'Donnell, J. A., Olefeldt, D., Paulson, A. K., Rocha, A. V., Saperstein, L. B., Shestakova, T. A., Sistla, S., Sizov, O., Soromotin, A., Turetsky, M. R., Veraverbeke, S., and Walvoord, M. A.: Permafrost-wildfire interactions: Active layer thickness estimates for paired burned and unburned sites in northern high-latitudes, *Earth System Science Data Discussions*, 1–36, <https://doi.org/10.5194/essd-2024-526>, 2024.
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Mackey, B., Hugh, S., Norman, P., **Rogers, B. M.**, and Dellasala, D.: Insights into Boreal Forest Disturbance from Canopy Stability Index, *Land*, 13, 1644, <https://doi.org/10.3390/land13101644>, 2024.

Ackermann, M., Amann, C., Cook, B., Davies, P., Glen, A., Frederick, J., Holdren, J., Ivey, M., Leland, R., Maddox, M., Miner, K., Natali, S., **Rogers, B.**, and Watts, J.: Pan-Arctic Methane: Current Monitoring Capabilities, Approaches for Improvement, and Implications for Global Mitigation Targets, Polar Institute, Woodrow Wilson International Center for Scholars, Washington, DC, 2024.

Clelland, A. A., Marshall, G. J., Baxter, R., Potter, S., Talucci, A. C., Rady, J. M., Genet, H., **Rogers, B. M.**, and Natali, S. M.: Annual and Seasonal Patterns of Burned Area Products in Arctic-Boreal North America and Russia for 2001–2020, *Remote Sensing*, 16, 3306, <https://doi.org/10.3390/rs16173306>, 2024.

Heffernan, E., Epstein, H., Declan McQuinn, T., **Rogers, B. M.**, Virkkala, A.-M., Lutz, D., and Armstrong, A.: Comparing assumptions and applications of dynamic vegetation models used in the Arctic-Boreal zone of Alaska and Canada, *Environmental Research Letters*, 19, 093003, <https://doi.org/10.1088/1748-9326/ad6619>, 2024.

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Jafarov, E. E., Briones, V., Kabeer, A., **Rogers, B. M.**, Natali, S., Genet, H., Rutter, R. M., and Carman, T. B.: Modeling the implications of post-fire alternative successional trajectory for boreal carbon and permafrost dynamics in Interior Alaska, in: *Proceedings. Volume 1: Conference Papers, 12th International Conference on Permafrost. Integrating Perspectives of Permafrost Thaw, Change, and Adaptation*, Whitehorse, Canada, <https://doi.org/10.52381/ICOP2024.145.1>, 2024.

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- Rodenhizer, H., Yang, Y., Fiske, G., Potter, S., Windholz, T., Mullen, A., Watts, J. D., and **Rogers, B. M.**: A Comparison of Satellite Imagery Sources for Automated Detection of Retrogressive Thaw Slumps, *Remote Sensing*, 16, 2361, <https://doi.org/10.3390/rs16132361>, 2024.
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- Walker, X. J., Baltzer, J. L., Laurier, W., Cumming, S. G., Day, N. J., Goetz, S. J., Johnstone, J. F., Potter, S., **Rogers, B. M.**, Schuur, E. a. G., Turetsky, M. R. and Mack, M. C.: ABoVE: Characterization of Carbon Dynamics in Burned Forest Plots, NWT, Canada, 2014, ORNL DAAC, doi:10.3334/ORNLDAAC/1664, 2019.
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- Walker, X. J., **Rogers, B. M.**, Baltzer, J. L., Cummings, S. R., Day, N. J., Goetz, S. J., Johnstone, J. F., Turetsky, M. R. and Mack, M. C.: ABoVE: Wildfire Carbon Emissions and Burned Plot Characteristics, NWT, CA, 2014-2016, ORNL Distributed Active Archive Center, doi:10.3334/ORNLDAAC/1561, 2018.
- Rogers, B. M.**, Soja, A. J., Goulden, M. L. and Randerson, J. T.: Fire Intensity and Burn Severity Metrics for Circumpolar Boreal Forests, 2001-2013, ORNL Distributed Active Archive Center, doi: 10.3334/ORNLDAAC/1520, 2017.
- Veraverbeke, S., **Rogers, B. M.**, Goulden, M. L., Jandt, R., Miller, C. E., Wiggins, E. B. and Randerson, J. T.: ABoVE: Ignitions, burned area and emissions of fires in AK, YT, and NWT, 2001-2015, ORNL Distributed Active Archive Center, doi:10.3334/ORNLDAAC/1341, 2017.
- Mouteva, G. O., Czimczik, C. I., Fahrni, S. M., Wiggins, E. B., **Rogers, B. M.**, Veraverbeke, S., Xu, X., Santos, G. M., Henderson, J., Miller, C. E. and Randerson, J. T.: CARVE: Fire-Related Aerosol and Soil Elemental and Isotopic Composition, Alaska, 2013, ORNL Distributed Active Archive Center, doi:10.3334/ORNLDAAC/1340, 2016.
- Veraverbeke, S., **Rogers, B. M.** and Randerson, J. T.: CARVE: Alaskan Fire Emissions Database (AKFED), 2001-2013, ORNL Distributed Active Archive Center, doi:10.3334/ORNLDAAC/1282, 2015.

GRANTS AWARDED

- Woodwell Fund for Climate Solutions | 2025 - 2026 | Co-PI | \$99,938
A Generic Climate AI Framework for Multi-domain Time Series Prediction
- Woodwell Fund for Climate Solutions | 2025 - 2026 | Co-PI | \$97,241
Climate and Indigenous-Centered Boreal Wildfire Risk Assessment
- Google.org | 2025 - 2028 | PI | \$2,000,000
Managing the Pyrocene: Leveraging geospatial technologies and AI to improve wildfire management from the Amazon to the Arctic
- Heising-Simons Foundation | 2025 - 2026 | PI | \$99,985
Supplemental funding request: A Deep Learning Model for Mapping pan-Arctic Permafrost Thaw Slumps
- Woodwell Fund for Climate Solutions | 2024 - 2026 | Co-I | \$124,000
Arctic Wildfire Pollutants: Towards Improving Emissions Estimates and Developing Tribally-Led Monitoring
- Joint Fire Science Program | 2024 - 2027 | Co-PI | \$22,216 (to Woodwell)
Informing effective strategies for managing carbon with increasing fire in boreal forests of interior Alaska
- Heising-Simons Foundation | 2024 - 2026 | PI | \$349,995
A Deep Learning Model for Mapping pan-Arctic Permafrost Thaw Slumps
- Gordon and Betty Moore Foundation Wildfire Resilience Initiative | 2024 - 2026 | PI | \$400,000 (to Woodwell)
Wildfire Resilience in Alaska
- Woodwell Fund for Climate Solutions | 2024 - 2026 | PI | \$139,423
Boreal Fire Management to Protect Permafrost and Carbon
- Google.org Impact Challenge in Climate Innovation | 2023 - 2026 | Co-PI | \$5,000,000
Tracking Arctic permafrost thaw with geo-AI to inform climate action
- Grant announcement showcased on ABC News, Alaska Beacon, Axios, Google.com, and Mashable
- NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2022 - 2025 | Co-I | \$118,853 (to Woodwell)

Drivers and impacts of Reburning in boreal forest ecosystems (DIRE)

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2022 - 2025 | Co-I | \$726,790

Contributions of tundra and boreal systems to radiative forcing in North America and Russia under contemporary and future conditions

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2022 - 2025 | Co-I | \$87,199 (to Woodwell)

Mapping and modeling attributes of an arctic - boreal biome shift: Phase-3 applications within the ABoVE domain

The Audacious Project | 2022 – 2028 | Co-PI | \$41,235,000

Integrating permafrost into our global solution for climate change

Heising-Simons Foundation | 2021 – 2023 | Co-PI | \$249,454

Mapping abrupt permafrost thaw in the Arctic

NSF Arctic System Science | 2021 – 2024 | Co-PI | \$499,169 (to Woodwell)

Collaborative Research: Climate warming and increasing wildfire in the boreal forests of Northwestern North America: Will vegetation change slow the feedback?

NASA Earth Science Division | 2021 – 2022 | Co-I | \$199,346

Developing high spatiotemporal resolution inundation maps to detect rapid changes in surface hydrology and methane hotspots across ecosystem gradients in Alaska

Quadrature Climate Foundation | 2021 – 2024 | Co-PI | \$2,999,563

Mitigating the Global Threat from Thawing Permafrost: the Arctic Carbon Monitoring and Prediction System (Arctic MaPS)

Woodwell Climate Research Center Fund for Climate Solutions | 2020 – 2022 | Co-I | \$98,125

Building an international network of ground observations for the Arctic Carbon Monitoring and Prediction System

NSF Arctic Natural Sciences | 2020 – 2023 | Co-I | \$170,395 (to WHRC)

Collaborative Research: Increasing wildfires and the loss of legacy carbon from boreal and tundra ecosystems

One Earth, Rockefeller Philanthropy Advisors | 2020 – 2021 | Co-PI | \$75,000 (total)

Accounting for permafrost carbon feedbacks in global climate policy: estimates for gradual thaw, abrupt thaw, and wildfire

Gordon and Betty Moore Foundation | 2019 – 2023 | Co-PI | \$2,399,613 (total)

Global threat from a warming Arctic: The case for an Arctic Carbon Monitoring and Prediction System

WHRC Fund for Climate Solutions | 2019 – 2021 | PI | \$37,817 (total)

Planning for intensifying boreal wildfires: societal risks, management influence, policy opportunities, and strategic partnerships

WHRC Fund for Climate Solutions | 2019 – 2021 | Co-I | \$133,878 (total)

Integrating state-of-the-art science with indigenous knowledge to support threatened Arctic communities

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2019 - 2022 | Co-I | \$164,828 (to WHRC)

Mapping and modeling attributes of an arctic - boreal biome shift: Phase-2 applications within the ABoVE domain

WHRC Fund for Climate Solutions | 2018 – 2019 | PI | \$24,896 (total)

Management of Alaska wildfires for climate mitigation

Material from this project featured in several Union of Concerned Scientists blogs, the Got Science? Podcast, BBC news, E&E News, Grist, the Juneau Empire, Fairbanks Daily News Miner, Anchorage Daily News, Kodiak Daily Mirror, Mat-Su Valley Frontiersman, and Alaska Native News

WHRC Fund for Climate Solutions | 2018 – 2019 | Co-I | \$180,045 (total)

Establishing an Arctic Climate Change and Carbon Observatory

WHRC Fund for Climate Solutions | 2019 – 2020 | Co-I | \$49,186 (total)

Towards a northern pyrogenic carbon budget

Griffith University | 2018 – 2022 | Co-I | \$599,996 (to WHRC)

Research into information, policy, and on-ground action for primary forest protection: boreal and temperate primary forests

DoD Strategic Environmental Research and Development Program (SERDP) | 2018 - 2019 | Co-PI | \$199,966 (total)

Integrating remote sensing and field measurements to identify environmental nonstationarity on interior Alaska DoD training lands

DoD Strategic Environmental Research and Development Program (SERDP) | 2018 - 2022 | Co-PI | \$483,653 (to WHRC)

Resiliency and vulnerability of boreal forest habitat to the interaction of climate and fire disturbance across DoD lands of interior Alaska

NASA Land Cover/Land Use Change | 2018 - 2021 | Co-I | \$89,792 (to WHRC)

Circumpolar albedo of northern lands from Landsat-8 and Sentinel-2

NASA Carbon Cycle Science | 2017 - 2020 | PI | \$1,378,730 (total)

Understanding the causes and implications of enhanced seasonal CO₂ exchange in boreal and arctic ecosystems

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2015 - 2018 | PI | \$741,804 (total)

Developing a spatially-explicit understanding of fire-climate forcings and their management implications across the ABoVE domain

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2015 - 2019 | Co-I | \$140,818 (to WHRC)

Mapping and modeling attributes of an arctic-boreal biome shift: Resource and management implications within the ABoVE domain

NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2015 - 2019 | Postdoc | \$240,200 (to WHRC)

Increasing fire severity and the loss of legacy carbon from forest and tundra ecosystems of northwestern North America

INTERFACE Student Collaborative Exchange Program, Purdue University | 2011 | Co-I | \$430 (total)

Examining the effects of water availability on land surface temperatures in grassland and forest ecosystems

MENTORING

Marly Bartkus | Research Assistant at Woodwell Climate Research Center | 2025

Kayla Mathes | Postdoctoral Researcher at Woodwell Climate Research Center | 2024 - 2025

Heidi Rodenhizer | Postdoctoral Researcher at Woodwell Climate Research Center | 2023-2025

Andrew Clelland | Visiting Ph.D. student at Woodwell Climate Research Center | 2023-2025

Chritina Schaedel | Research Scientist at Woodwell Climate Research Center | 2023-2025

Elchin Jafarov | Research Scientist at Woodwell Climate Research Center | 2023-2025

Joshua Rady | Postdoctoral Researcher at Woodwell Climate Research Center | 2022 - 2025

Anna Gagne-Landmann | Research Assistant at Woodwell Climate Research Center | 2022 – 2023 | Now Ph.D. student at Northern Arizona University

Aiza Kabeer | Research Assistant at Woodwell Climate Research Center | 2022 – 2023 | Now Ph.D. student at the University of Arizona

Ridhima Sing | Intern at Woodwell Climate Research Center | 2022 – 2023 | Now Bachelor of Science student at the Massachusetts Institute of Technology

Anna Talucci | Postdoctoral Researcher at Woodwell Climate Research Center | 2022 - 2025

Naren Vohra | Intern at Woodwell Climate Research Center | 2022 | Now Postdoctoral Research Associate at Los Alamos Laboratory

Yili Yang | Data Science Consultant at Woodwell Climate Research Center | 2022 - 2025

Valeria Briones | Research Assistant at Woodwell Climate Research Center | 2021 - 2025

Jacquelyn Dean | Research Assistant at Woodwell Climate Research Center | 2021 - 2025

Anna Virkkala | Postdoctoral Researcher, then Research Scientist at Woodwell Climate Research Center | 2020 - 2025

Arden Burrell | Postdoctoral Researcher at WHRC | 2020 - 2025

Scott Zolkos | Postdoctoral Fellow at WHRC (joint with Harvard) | 2020 - 2023

Sara Giacomini | Research Assistant at WHRC | 2019 - 2020

Kathleen Savage | Research Associate at WHRC | 2019 - 2020

Jocelyne Laflamme | Summer intern at WHRC | 2019 | Now Research Geographer at the University of British Columbia

Molly Elder | Ph.D. student at Tufts University | 2018 - 2022

Tatiana Shestakova | Postdoctoral Researcher at WHRC | 2019 – 2022 | Now Postdoctoral Researcher at the University of Lleida

Carly Phillips | Postdoctoral Fellow at WHRC (joint with Union of Concerned Scientists) | 2018 – 2020 | Now Research Scientist at the Union of Concerned Scientists

Machteld Vergouw | Visiting M.A. student at Tufts University | 2018

Michael Moubarak | Summer intern at WHRC | 2018 | Now Ph.D. student at the University of California, Berkeley

Sol Cooperdock | Research Assistant at WHRC | 2018 – 2019 | Now Research Associate at Brown University

Leah Birch | Postdoctoral Fellow at WHRC | 2017 – 2020 | Now Atmospheric Data Scientist at MORSE Corp

Julia Nojeim | Summer intern at WHRC | 2017 | Now Clean Energy Coordinator at the Yale Center for Business and the Environment

Stefano Potter | Research Associate at WHRC | 2017 - 2024

Kylen Solvik | Research Assistant at WHRC | 2015 – 2018 | Now Ph.D. student of Geography at University of Colorado, Boulder

SYNERGISTIC ACTIVITIES

Market Research Group | Woodwell Climate Research Center | 2024 - 2025

Research Priority Team Member | International Conference on Arctic Research Planning | Observing, Reconstructing, and Predicting Future Climate Dynamics and Ecosystem Responses | 2024 - 2025

Diversity, Inclusion, Retention, and Equity (DIRE) Committee | Woodwell Climate Research Center | 2023

Advisory Board member | NGEE-Arctic Phase 4 | 2023 - 2025

Joint Oak Ridge National Laboratory and Land Processes Laboratory Distributed Active Archive Center (ORNL and LP DAAC) User Working Group | 2023

Co-lead | Permafrost Pathways | 2022 - 2025

Space Committee | Woodwell Climate Research Center | 2022 - 2023

Ph.D. Committee Member | University of Massachusetts, Boston, 2017-2021 | Clark University, 2020 – 2023 | Tufts University, 2022 - 2023

Co-organizer, Co-lead, and Session Lead | Arctic-Boreal Carbon Flux Upscaling Workshop | 2020

Working Group Co-Lead | NASA ABoVE Vegetation Dynamics and Distribution | 2019 - 2023

Organizing Committee | National Academies of Sciences, Engineering, and Medicine workshop, *Greenhouse Gas Emissions from Wildland Fires: Towards Improved Monitoring, Modeling, and Management*, 2023 | NASA ABoVE Science Team Meetings, 2019 – 2020, 2022 - 2023 | Research to Operations workshop: Using ABoVE Data in Fire and Resource Management, 2019 - 2022

Primary Forest Task Team Member | International Union for Conservation of Nature | 2018 - 2022

Guest Editor | Philosophical Transactions of the Royal Society B, *Novel fire regimes in the Anthropocene: Ecological and evolutionary effects on biodiversity and carbon cycling*, 2023 - 2025 | Environmental Research Letters, *Resiliency and Vulnerability of Arctic and Boreal Ecosystems to Environmental Change: Advances and Outcomes of ABoVE (the Arctic Boreal Vulnerability Experiment)*, 2017 – 2024 | Environmental Research Letters (lead guest editor) | *Focus on Changing Fire Regimes: Interactions with Climate, Ecosystems, and Humans* | 2015-2020

Steering Committee | Future of Fire Workshop (NSF), 2017 | WHRC Strategic Planning Committee, 2017 | International Boreal Forest Research Association (IBFRA) Meeting, 2018 – 2021 | WHRC Rebranding Committee, 2019-2020

Co-Lead | Interagency Arctic Research Policy Committee (IARPC) Terrestrial Ecology Fire Working Group | 2017 - 2019

Science Team Member | NASA Arctic-Boreal Vulnerability Experiment (ABoVE) | 2015 - 2025

Organizer | WHRC monthly Journal Club | 2015 - 2019

Session Organizer and Convener | International Boreal Forest Research Association Conference, *Forest Integrity, Ecosystem Services, and Management in the Boreal Zone; Changing Carbon Cycle Dynamics of Boreal Ecosystems; Observed Changes in Boreal Forest Productivity and Demographics; Projections of Future Changes in Boreal Forest Productivity and Demographics*, 2021 | American Geophysical Union Fall Meeting, *The Role of Fire in the Earth System: Understanding Drivers, Feedbacks, and Interactions with the Land, Atmosphere and Society*, 2015, 2017, 2018, 2020; *Forest Disturbance in the Context of Shifting Climate: Understanding Disturbances and Their Interactions as Agents of Forest Change*, 2020 | Ecological Society of America Annual Meeting, *Modeling: Communities, Disturbance, and Succession*, 2014

OUTREACH

US congressional consultation | Committee on Indian Affairs, House Sustainable Energy and Environment Coalition, Representative Mary Peltola, Senator Lisa Murkowski, US Arctic Research Commission, White House Office of Science and Technology Policy | 2024

Land management | Collaborated with US Fish and Wildlife Service on landmark decision to protect Yedoma permafrost from wildfire | 2023

Media Features | Cabin Radio, *Scientists look to keep NWT's huge carbon stores out of the air*, 2025 | New York Times, *Worrying signs from the Arctic*, 2024 | The Economist, *Wildfires are getting more frequent and more devastating*, 2024 | The Telegraph, *Why Alaska's elite firefighters are being deployed to protect its permafrost*, 2024 | Alaska Beacon, *An Alaska wildlife refuge is changing its wildfire strategy to limit carbon emissions*, 2024 | Alaska Nightly News, 2024 | Wired, *The World is Ignoring the Other Deadly Kind of Carbon*, 2024 | Nature, *Epic blazes threaten Arctic permafrost. Can firefighters save it?*, 2024 | Washington Post, *Alaska firefighters experiment with targeting blazes to save carbon*, 2023 | Bloomberg, *Wildfires Are Set to Double Canada's Climate Emissions This Year*,

2023 | CNN, *Canada's wildfire season is off to an 'unprecedented' start. Here's what it could mean for the US*, 2023 | New York Times, *Record Pollution and Heat Herald a Season of Climate Extremes*, 2023 | BNN Bloomberg, *It's Already a Large Fire Year in Canada: Weather Watch*, 2023 | Susan Bauer-Wu, *A Future We Can Love: How we can Reverse the Climate Crisis Through the Power of our Hearts & Minds*, 2023 | Science|Business, *Arctic researchers forced to modify projects amid geopolitical tensions with Russia*, 2022 | The New York Times, *A Warming Siberia, wracked by wildfires, nears a crucial threshold*, 2022 | CNN, *Belching lakes, mystery craters, 'zombie fires': How the climate crisis is transforming the Arctic permafrost*, 2022 | The Financial Times, *The Ancient Subarctic Forests at Risk from Climate Change and War*, 2022 | Reuters, *Why Arctic Fires are Releasing More Carbon than Ever*, 2022 | Nature, *Russia's war in Ukraine forces Arctic climate projects to pivot*, 2022 | Ben Rawlence, *The Treeline: The Last Forest and the Future of Life on Earth*, 2022 | Grist, *The 7 Climate Tipping Points that Could Change the World Forever*, 2021 | CarbonBrief, *Nine 'Tipping Points' That Could be Triggered by Climate Change*, 2020

Educational video | TED Ed, *What's hidden in Arctic ice?* Brendan Rogers and Jessica Howard, 2023

Climate Conference of the Parties | *Permafrost Day, Cryosphere Pavilion*, 2022

Contributing Subject Matter Expert | US Group on Earth Observations, *Earth Observations Assessment Report: Agriculture and Forestry*, 2023 | NASA Request for Information, *Terra and Aqua Orbital Drift Enables Novel Fire Science*, 2022 | NASA Request for Information, *Burning Questions: Critical Needs for Remote Sensing of Fire Impacts on Ecosystems*, 2015

Panelist | Arctic Report Card Press Release, Washington D, 2024 | Arctic Circle Assembly, *The growing circle of Arctic methane emissions; Emerging risks in the Arctic: current and future priorities for emergency management*, Reykjavik, Iceland, 2024 | 20 Summers, *World on Fire: Woodwell Climate Research*, Provincetown, MA, 2023 | Woodwell Climate Research Center, *Permafrost Pathways: Connecting Science, People, and Policy for Arctic Justice and Global Climate*, 2022

Op-ed | Scientific American, *How stopping Alaskan wildfires can slow climate change*, 2022 | The Hill, *The major emitter that's missing from climate negotiations*, 2021

Website Development and Curation | *Permafrost Pathways*, <https://permafrost.woodwellclimate.org/>, 2022 – 2023 | *Unstable Ground*, <https://www.unstableground.org/>, 2020 - 2021

Blog Contributor | Union of Concerned Scientists, *Extreme Fires, Creative Solutions*, 2019

Policy Briefs | *Using Ecosystem Integrity to Maximize Mitigation and Minimize Risk in International Forest Policy*, Griffith University, 2023 | *Boreal, Temperate, and Tropical Primary Forests*, WHRC, 2019 | *Northern High-Latitude Wildfires and Climate Change*, WHRC, 2018

Documentaries | Northern Light Productions, *Climate Emergency: Feedback Loops*, 2021 | Canadian Broadcasting Corporation, *The Nature of Things, What Trees Talk About*, 2017

Seminar & Guest Lecturer | Yakut Scientific Center, Harvard University, Clark University, Stonehill College, WHRC Community Lecture, WHRC Board of Directors, WHRC Kaneb Lecture, Trillium Asset Management, The Greene School, Northern Water Futures, IARPC, Tongji University, Jet Propulsion Laboratory Carbon Club | 2015 - 2023

Course Designer and Presenter | Climate, Literacy, Empowerment, And iNquiry (CLEAN) education program | 2009 – 2014

HONORS, AWARDS, AND FELLOWSHIPS

2020 Editor's Citation for Excellence in Refereeing for Geophysical Research Letters | May 2021

2013 Editor's Citation for Excellence in Refereeing for Eos | Apr 2014

Outstanding Oral Presentation by a Young Scientist, 16th Conference of the International Boreal Forest Research Association | Oct 2013

NSF Graduate Research Fellowship | Oct 2009 – Sep 2011; Oct 2012 – Sep 2013

University of California, Irvine Chancellor's Fellowship | Oct 2009 – Sep 2011; Oct 2012 – Sep 2013

Jenkins Graduate Fellowship | Jan 2012 – Mar 2012

International Biogeography Society Student Travel Award | Jan 2009

Tarbell Book Prize in Organic Chemistry, Hamilton College | May 2003

Kirkland Prize in Mathematics, Hamilton College | May 2003

Oren Root Scholarship for Mathematics, Hamilton College | May 2003

Phi Beta Kappa, Hamilton College | May 2003

Summa Cum Laude, Hamilton College | May 2003

Departmental Honors in Mathematics, Hamilton College | May 2003

General Honors, Hamilton College | May 2003