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abpoll   
Adam Pollack 

## Adam Pollack

### research interests

Equity in climate risk management  
Values informed decision-making under uncertainty  
Flood risk dynamics in housing markets  
Uncertainty in flood risk valuation and estimation  
Reproducibility and usefulness of scientific practices

### appointments

#### Dartmouth College

Research Scientist, Thayer School of Engineering, 2024–present.  
Postdoctoral Research Associate, Thayer School of Engineering, 2022–2024.  
adviser: Klaus Keller

### education

#### Boston University

Ph.D, Earth & Environment, 2022.  
dissertation: Flood Risk Valuation and Estimation from County to Continental Scales  
advisers: Christoph Nolte and Ian Sue Wing

#### Stony Brook University

M.S., Applied Mathematics and Statistics, 2017.  
B.S., Applied Mathematics and Statistics, 2016.

### grants and contracts

**Co-Principal Investigator**, “Contribute to the Integrated Coastal Modeling (ICoM) project, Subaward to Dartmouth College from Battelle”. PI: Klaus Keller. DOE-Prime, \$231,794. 2023–2024.

### journal articles

**Pollack, A. B.**, Helgeson, C., Kousky, C., and Keller, K. **2024**. *Developing more useful equity measurements for flood-risk management*. *Nature Sustainability*, pp. 1–10. DOI: 10.1038/s41893-024-01345-3.

Gourevitch, J. D., Kousky, C., Liao, Y., Nolte, C., **Pollack, A. B.**, Porter, J. R., and Weill, J. A. **2023**. *Unpriced climate risk and the potential consequences of overvaluation in US housing markets*. *Nat. Clim. Chang.*, pp. 1–8. DOI: 10.1038/s41558-023-01594-8.

Hennighausen, H., Liao, Y., Nolte, C., and **Pollack, A.** **2023**. *Flood insurance reforms, housing market dynamics, and adaptation to climate risks*. *J. Hous. Econ.* 62, p. 101953. DOI: 10.1016/j.jhe.2023.101953.

Nolte, C., Boyle, K. J., Chaudhry, A., Clapp, C., Guignet, D., Hennighausen, H., Kushner, I., Liao, Y., Mamun, S., **Pollack, A.**, Richardson, J., Sundquist, S., Swedberg, K., and Uhl, J. H. **2023**. *Data Practices for Studying the Impacts of Environmental Amenities and Hazards with Nationwide Property Data*. *Land Econ.* DOI: 10.3368/le.100.1.102122-0090R.

**Pollack, A. B.**, Wrenn, D. H., Nolte, C., and Wing, I. S. **2023**. *Potential Benefits in Remapping the Special Flood Hazard Area: Evidence from the U.S. Housing Market*. *J. Hous. Econ.* 61, p. 101956. DOI: 10.1016/j.jhe.2023.101956.

**Pollack, A. B.** and Kaufmann, R. K. **2022**. *Increasing storm risk, structural defense, and house prices in the Florida Keys*. *Ecol. Econ.* 194 C. DOI: 10.1016/j.ecolecon.2022.107350.

**Pollack, A. B.**, Sue Wing, I., and Nolte, C. **2022**. *Aggregation bias and its drivers in large scale flood loss estimation: A Massachusetts case study*. *J. Flood Risk Manag.* 15 4. DOI: 10.1111/jfr3.12851.

Castigliego, J. R., **Pollack, A.**, Cleveland, C. J., and Walsh, M. J. **2021**. *Evaluating emissions reductions from zero waste strategies under dynamic conditions: A case study from Boston*. *Waste Manag.* 126, pp. 170–179. DOI: 10.1016/j.wasman.2021.02.026.

Bhaduri, P., **Pollack, A.**, Yoon, J., Chowdhury, P. K. R., Wan, H., Judi, D., Daniel, B., and Srikrishnan, V. **2024**. *Uncertainty in household behavior drives large variation in the size of the levee effect*. In Review. DOI: 10.31219/osf.io/9ejn8.

**Pollack, A.**, Doss-Gollin, J., Srikrishnan, V., and Keller, K. **2024**. *UNSAFE: An UNcertain Structure And Fragility Ensemble framework for property-level flood risk estimation*. In Review. DOI: 10.31219/osf.io/jb9ta.

**Pollack, A.**, Santamaria-Aguilar, S., Maduwantha, P., Helgeson, C., Wahl, T., and Keller, K. **2024**. *Funding rules that promote equity in climate adaptation outcomes*. In Review. DOI: 10.31219/osf.io/6ewmu.

**Pollack, A.**, Auermuller, L., Burleyson, C., Campbell, J. E., Condon, M., Cooper, C., Coronese, M., Dangendorf, S., Doss-Gollin, J., Hegde, P., Helgeson, C., Kopp, R., Kwakkel, J., Leaf, A., Lesk, C., Mankin, J., Nicholas, R., Roth, S., Rice, J., Srikrishnan, V., Scheeler, M., Tuana, N., Vernon, C., Zhao, M., and Keller, K. **2023**. *Investing in open and FAIR practices for more usable and equitable climate-risk research*. In Review.

**Pollack, A.**, Wing, I. S., Pinter, N., and Nolte, C. **2022**. *New Empirical Models for Flood Loss Prediction and Implications for the Coterminous United States*.

Castigliero, J. R., Walsh, M. J., **Pollack, A.**, and Cleveland, C. J. **2019**. *Carbon free Boston: waste technical report*. Tech. rep.

Hatchadorian, R., Best, R., Wholey, K., Calven, A., Levine, E., and **Pollack, A.** **2019**. *Carbon Free Boston: Buildings Technical Report*. Tech. rep.

Walsh, M. J., Fox-Penner, P., Zheng, K., **Pollack, A.**, and Cleveland, C. J. **2019**. *Carbon Free Boston: Energy Technical Report*. Tech. rep.

Walsh, M. J., Kinney, P. L., Levy, J. I., Tallon, L., Skipper, N., Russell, A., Castigliero, J. R., **Pollack, A.**, Zheng, K., and Cleveland, C. J. **2019**. *Carbon Free Boston: Technical Summary*. Tech. rep.

Kopp, R., Auermuller, L., Gilmore, E., Keller, K., Oppenheimer, M., **Pollack, A.**, Bennett Gayle, D., Lorenzo-Trueba, J., Geronimo, L., and Santamaria Aguilar, S. **2023**. *Comment on Army Corps of Engineers New York and New Jersey Harbor & Tributaries Focus Area Feasibility Study (HATS)*.

**"Improving equity considerations in multisector dynamics research"**, 2024 Energy Modeling Forum Snowmass Workshop, *Department of Energy, Biological and Environmental Research*. Snowmass, Colorado, 2024.

**"Funding rules that promote equity in climate adaptation outcomes"**, Faculty Seminar Series Talk, *The Arthur L. Irving Institute for Energy and Society at Dartmouth*. Hanover, New Hampshire, 2024.

**"Funding rules that promote equity in climate adaptation outcomes"**, University of Rhode Island Spring 2024 Seminar, *Department of Environmental and Natural Resource Economics*. Kingston, Rhode Island, 2024.

**"Reproducible science is a foundation of convergence research"**, MACH Seminar Series, *Megalopolitan Coastal Transformation Hub (MACH)*. Online, 2024.

**"Transparency on underlying values is needed for useful equity measurements"**, Working Group on Social-Science Water Research Invited Seminar Talk, *Helmholtz Centre for Environmental Research GmbH - UFZ*. Online, 2024.

**"An Uncertain Structure and Fragility Ensemble (UNSAFE) for Flood Risk Assessments"**, Bi-Monthly ICoM-MSD Seminar Series, *Integrated Coastal Modeling project, Pacific Northwest National Laboratory*. Online, 2024.

**"CoPe Cross-Hub Community of Practice: Successes and struggles on the path to convergence research"**, CoPe Cross-Hub Community of Practice Seminar, *National Science Foundation*. Online, 2023.

**"Equity and Deep Uncertainty in Benefit Cost-Analyses Deep Dive"**, Annual Meeting of the Megalopolitan Coastal Transformation Hub, *Rutgers University-Camden*. Camden, New Jersey, 2023.

**"Supporting Integration Through MACH Prototype Decision-Analyses"**, Integration Meeting of the Megalopolitan Coastal Transformation Hub, *Rutgers University*. Online, 2022.

- "Using Toy Problems to Improve Intuition, Convergent Research Designs, and Decision-Support"**, Seminar Meeting of the Megalopolitan Coastal Transformation Hub, *Rutgers University*. Online, 2022.
- "Do markets price weather-related risks?"**, Climate Econometrics Seminar Series, *Climate Econometrics, Nuffield College, University of Oxford*. Online, 2021.
- "Can property level flood losses be reliably predicted?"**, First Street Foundation Flood Lab Workshop, *First Street Foundation*. Online, 2021.
- "Flood Loss Risk and Its Drivers: Evidence from Massachusetts Residential Properties"**, 2020 Climate and Health Seminar, *Boston University School of Public Health*. Online, 2020.
- "Parcel level flood risk and interventions in Massachusetts"**, Cloud to Street Lab Meeting, *Cloud to Street*. Online, 2020.

conference  
presentations

- Bhaduri, P., Pollack, A., and Srikrishnan, V. 2024. *Modeling Household Responses to Coastal Urban Flooding*. Department of Energy Earth and Environmental Systems Modeling (Bethesda, MD).
- Xu, D., Keller, K., Pollack, A., and Snyder, H. 2024. *Improving Uncertainty Characterization in Home Energy Projections*. Home Energy Decarbonization Workshop (Hanover, NH).
- Pollack, A., Wrenn, D., Sue Wing, I., and Nolte, C. 2022. *Flood risk signals in the property market and implications for flood risk management*. 2022 ZTRAX Special Issue Workshop (Remote).
- Pollack, A., Sue Wing, I., Pinter, N., and Nolte, C. 2021. *Can property level losses be reliably predicted?* 2021 PLACES Webinar: Land, Water, and ZTRAX (Remote).
- Pollack, A. and Kaufmann, R. 2020. *Market prices for weather-related risk: Hurricane Irma and house prices in the Florida Keys*. 2020 American Geophysical Union Fall Meeting (Remote).
- Pollack, A. and Kaufmann, R. 2020. *Pricing weather-related risk mitigation in coastal housing markets: insights from the Florida Keys after Hurricane Irma*. 2020 Association of Environmental and Resource Economists Summer Conference (Remote).
- Pollack, A., Sue Wing, I., and Nolte, C. 2020. *High-resolution flood loss estimates are necessary for effective flood risk management*. 2021 Northeast Agricultural Regional Economics Association Annual Meeting (Remote).
- Pollack, A. 2020. *Data Inputs to Hedonic Flood Risk Models*. 2020 PLACES Webinar (Remote).
- Pollack, A. 2020. *Geo-location ZTRAX*. 2020 PLACES Webinar (Remote).

conference  
posters

- Pollack, A., Doss-Gollin, J., Srikrishnan, V., and Keller, K. 2024. *An UNcertain Structure and Fragility Ensemble (UNSAFE) Framework for Property-Level Flood-Risk Estimation*. Department of Energy Earth and Environmental Systems Modeling (Bethesda, MD).
- Pollack, A., Helgeson, C., Kousky, C., and Keller, K. 2023. *Transparency on underlying values is needed for useful equity measurements (Poster)*. 2023 American Geophysical Meeting Fall Meeting (San Francisco, CA).
- Pollack, A., Helgeson, C., Kousky, C., and Keller, K. 2023. *Transparency on underlying values is needed for useful equity measurements (Poster)*. Annual Conference of the Society of Decision Making Under Deep Uncertainty (Delft, NL).
- Pollack, A., Helgeson, C., Kousky, C., and Keller, K. 2023. *Transparency on underlying values is needed for useful equity measurements (Poster)*. Advancing Complex Adaptive Human-Earth Systems Science in a World of Interconnected Risks (Davis, CA).
- Pollack, A., Sue Wing, I., Pinter, N., Schaefer, K., and Nolte, C. 2021. *Can property level flood losses be reliably predicted?* 2021 American Geophysical Meeting Fall Meeting (Remote).
- Pollack, A., Sue Wing, I., and Nolte, C. 2020. *Flood Loss Risk and Its Drivers: Evidence from Massachusetts Residential Properties*. 2020 American Geophysical Union Fall Meeting (Remote).
- Pollack, A. 2016. *Panama Papers: Temporal and Spatial Trends in Entity Formation*. Symposium on Big Data, Human Health and Statistics (Ann Arbor, MI).

advising

*Undergraduate*

Rainwater Harvesting User Study and Instrumentation Design. Thayer School of Engineering. Engs 89/90 Capstone Project Advisor. 2024–present.

Elaine Sarazen. Thayer School of Engineering. Research Co-Mentor (with Klaus Keller). 2023–present.

Daniel Xu. Quantitative Social Science & Geography. Research Co-Mentor (with Klaus Keller). 2023–present.

Julian Gutierrez. Thayer School of Engineering. Research Co-Mentor (with Klaus Keller). 2023–present.

Camry Gach. Undeclared. WISP Research Internship Program Co-Mentor (with Klaus Keller). 2022–2023.

Carter (Street) Roberts. Quantitative Social Sciences & Environmental Studies. Research Co-Mentor (with Klaus Keller). 2022–2023.

peer review

Business & Economics

Earth's Future

Environmental Modelling & Software

Land Economics

Natural Hazards

Royal Society Open Science

Water Resources Research

awards

**Research Fellowship**, Boston University, 2022.

**Research Fellowship**, Boston University, 2021.

**Teaching Fellowship**, Boston University, 2021.

**Research Fellowship**, Boston University, 2020.

**Teaching Fellowship**, Boston University, 2020.

**Research Fellowship**, Boston University, 2019.

**Dean's Fellowship**, Boston University, 2019.

teaching

**Boston University**

Data, Models and Analysis in Earth and Environment. Teaching Fellow and Lab Instructor. Spring 2021.

Data, Models and Analysis in Earth and Environment. Teaching Fellow and Lab Instructor. Spring 2020.

**Dartmouth College**

How to produce FAIR analyses. Developed and Presented Teaching Module in Bayesian Statistical Modeling and Computation Course. Winter 2024.

**Stony Brook University**

Software Development Fundamentals. Teaching Assistant. Spring 2016.

service

**Technical Advisory Group Member**, Massachusetts' Executive Office of Energy and Environmental Affairs Pluvial and Fluvial Flood Mapping. 2024–present.

**Member**, NSF Cross CoPe Student and Postdoc Planning Committee. 2024–present.

**Social and Behavioral Research - Basic**, CITI program. 2022–2025.

Record #48549028.

**Invited Panelist**, Dartmouth Feldberg Library Open Data Panel. 2024.

**Abstract Reviewer**, Northeastern Agricultural Resource Economics Association. 2023–2024.

**Notetaker and Rapporteur**, Multisectoral Dynamics Workshop Equity Breakout Sessions. 2023.

**Co-Chair, Student Postdoc Leadership Council**, Megalopolitan Coastal Transformation Hub. 2022–2023.

**Lead, Data Integration Working Group**, Megalopolitan Coastal Transformation Hub. 2022–2023.

**Founder, Irving Institute Research Labs Seminar Group**, Irving Institute for Energy & Society. 2022–2023.

**Session Chair, Property Values (Flood Risk)**, Association of Environmental and Resource Economists 2020 Virtual Summer Conference. 2020.