

The Science Behind Trust: Jupiter Climate Experts

In a world where climate risk is one of the greatest challenges of our time, trust in data-driven insights is essential. At Jupiter, that trust is built on a foundation of gold standard science. Our team comprises leading experts in meteorology, climatology, hydrology, statistics, machine learning, and other critical fields. These pioneers bring decades of research, modeling, and real-world expertise to ensure our climate analytics are the most accurate and reliable available.

Jupiter stands apart by prioritizing scientific integrity above all else. While some companies rush solutions to market, Jupiter was founded on rigorous, peer-reviewed research. Every model, forecast, and dataset is built on the best available science, refined by experts dedicated to precision. This commitment ensures that businesses, governments, and communities can rely on Jupiter's analytics to make informed, data-driven decisions about climate risk and building resilience.

Beyond research, Jupiter's team bridges the gap between science and real-world application, making complex insights actionable for industries including banking and finance, infrastructure, and government.

“We built the company from science outward with the express intent of building trust in our methodology. And so we're able to explain what we do, our strengths & weaknesses, and uncertainty. We can demonstrate what our models are good at and how to interpret the data in ways that a lot of other companies just can't do, because they haven't invested in the science.”

– Josh Hacker, Chief Science Officer and Co-founder, Jupiter Intelligence

Demonstrating Leadership in Science

The depth and breadth of Jupiter's commitment to science is reflected in how its scientists engage with the broader, worldwide scientific community. The following listings fall into three key categories:

- **Peer-Reviewed Papers** – Rigorous, validated research that advances global climate science.
- **Scientific Presentations** – Conference talks and sessions that share insights and foster collaboration.
- **Panels and Leadership Roles** – Active participation in shaping the scientific agenda and future of the field.

Why Trust Jupiter?

Because science is our foundation. Our experts don't just analyze data—they shape the future of climate risk analytics. Every insight we provide is grounded in rigorous research and real-world validation. In an era of climate uncertainty, Jupiter delivers clarity and confidence, empowering organizations to navigate the challenges ahead with the highest level of trust in their data.



Leading the Conversation on Climate Risk

Discover how Jupiter's world-class scientists are shaping the future of climate risk analytics through groundbreaking research and expert presentations

Year	Meeting/Conference	Citation	Source
2026	AMS	Neisary, S.N., Rogers, J., Hampson, H.M., Perry, E., Ellenson, A., Oyler, J.W., & J. Hacker, J. (2026). A Remote Sensing-Based Machine Learning Model For Post-Event Flood Mapping. AMS Annual Meeting, Houston, TX.	[Link]
2026	AMS	Scannell, H., Dennis, E., Ghazni, W., Ellenson, A., Perry, E., Hoffman, A., Sain, S.R. & Kapoor, A. (2026). Framework for Validating Economic Loss Models for Climate Driven Flood and Wind Hazards. AMS Annual Meeting 2026, Houston, TX.	[Link]
2026	AMS	McGraw, M. (2026). Estimating Flood Risk for an Atlantic Meridional Overturning Circulation Collapse: A Study of Climate Tipping Points in Climate Risk Modeling. AMS Annual Meeting 2026, Houston TX.	[Link]
2026	AMS	Ghanzi, W. (2026). The Financial Price of Physical Climate Risk for Global Corporations. AMS Annual Meeting 2026, Houston, TX.	[Link]
2025	AGU	Rogers, J., Hampson, H., Hoffman, A., Scannell, H., Dennis, E., Oyler, J., McNicholas, C., Perry, E., Kapoor, A., Woelfle, M., Pucciarelli, J., Exby, J. & Sain, S.R. (2025). Next-generation tropical cyclone risk modeling: an integrated, scalable, and climate-responsive approach. AGU 2025 Meeting, New Orleans, LA.	[Link]
2025	AGU	Hacker, J. & Harr, P.J. (2025). Climate-Informed Risk Assessment for Extreme Events. AGU 2025 Meeting, New Orleans, LA.	[Link]
2025	AGU	Hampson, H., Perry, E., Pucciarelli J., McNicholas C., Woelfle, M. & Rogers, J. (2025). A Scalable Approach for Maximizing Global Flood Model Resolution. AGU 2025 Meeting, New Orleans, LA.	[Link]
2025	AGU	Perry, E., Scannell H., Pucciarelli, J. & Rogers, J. (2025). A Novel Probabilistic Framework for Assessing Global Shrink-Swell Subsidence Hazard. AGU 2025 Meeting, New Orleans, LA.	[Link]
2025	AMS	Ghazni, W. & Kapoor A. (2025). Climate Price Bubble: Economic Impact in US Housing Market. AMS 2025 Meeting, New Orleans, LA.	[Link]
2025	AMS	Hoffman, A., Sain, S., Oyler, J.W., McNicholas, C.J., Scannell, H., Pucciarelli, J., & Hacker, J. (2025). Use of machine learning and AI to improve the utility of climate risk data. AMS 2025 Meeting, New Orleans, LA.	[Link]
2025	AMS	Perry, E., Hampson, H.M., Oyler, J.W., & Rogers, J. (2025). An Automated Cloud-Based Hydrodynamic Flood Modeling Workflow. AMS 2025 Meeting, New Orleans, LA.	[Link]
2025	AMS	Weatherhead, E.C., Arnold, M., Hoffman, A., Hampson, H.M., & Ghazni, W. (2025). Climate Risk Information to Build Resilience Among the World's Most Vulnerable. AMS 2025 Meeting, New Orleans, LA.	[Link]
2025	AMS	Weatherhead, E.C. (2025). Advances in Accuracy and Continuity of Climate Observations: international Coordination and Prioritization. AMS 2025 Meeting, New Orleans, LA.	[Link]
2025	AMS	Weatherhead, E.C. (2025). Planning our Evolving Climate Observing System: Identifying Priorities and Evaluation Techniques. AMS 2025 Meeting, New Orleans, LA.	[Link]
2025	AMS	McNicholas, C.J., Hoffman, A., & Sain, S. (2025). Enhancing Climate Projections: A Multivariate Probabilistic Weather Generator Using a Denoising Diffusion Model. AMS 2025 Meeting, New Orleans, LA.	[Link]
2024	AGU	Rogers, J., Sain, S., & Hacker, J. (2024). How climate and population change affect global flood exposure and vulnerability. AGU 2024 Meeting, Washington DC.	[Link]
2024	AGU	Liu, Z., Scannell, H., Hampson, H., Rogers, J. (2024). A Hybrid Physics-ML Approach for Coastal Storm Surge Hazard Mapping. AGU 2024 Meeting, Washington DC.	[Link]
2024	AGU	Perry, E. & Hacker, J. (2024). Evaluating Flood Risk Trajectories from Compound Hazards in Greater Boston: The Impact of Future Climate Scenarios. AGU 2024 Meeting, Washington DC.	[Link]
2024	AMS	Hacker, J. (2024). Private Sector Contributions to CIROH: the Role of Jupiter Intelligence. AMS 2024 Meeting, Baltimore.	[Link]
2024	AMS	Weatherhead, E.C., Hampson, H.M., Hoffman, A., & Arnold, M. (2024) Understanding and Addressing Climate Risks in the Caquetá River Valley. AMS 2024 Meeting, Baltimore, MD.	[Link]
2024	AMS	Weatherhead, E.C., Arnold, M., Hoffman, A., & Evans, M. (2024). Addressing Environmental Risks in the Changing Climate of Nepal. AMS 2024 Meeting, Baltimore, MD.	[Link]
2024	AMS	Weatherhead, E.C., Arnold, M., Hoffman, A., Yonan, C., Hampson, H.M., Mansfield, J., & Evans, M. (2024) Principles for Using Climate Science to Address Climate Justice. AMS 2024 Meeting, Baltimore, MD.	[Link]
2024	AMS	Weatherhead, E.C., & Lee, S. (2024). Metrology for Climate Action. AMS 2024 Meeting, Baltimore, MD.	[Link]
2024	AMS	Perry, E. & McNicholas, C.J. (2024). A High Resolution Global Pluvial Flood Model for Predicting Physical Risk in a Changing Climate. AMS 2024 Meeting, Baltimore, MD.	[Link]
2024	AMS	Hacker, J. & Harr, P.J. (2024). Setting the Bar for Climate Risk Scenario Analysis. AMS 2024 Meeting, Baltimore, MD.	[Link]
2024	AMS	Harr, P.J. (2024). Sensitivity Analysis for Assessing Climate Change Impacts on the Economy in an Integrated Assessment Model. AMS 2024 Meeting, Baltimore, MD.	[Link]
2024	AMS	Weatherhead, E.C., Towards a U.S. Framework for Continuity of Satellite Observations of Earth's Climate and for Supporting Societal Resilience. AMS 2024 Meeting, Baltimore, MD.	[Link]
2024	AGU Ocean Sciences	T. Kalra, J. Rogers, H. Hampson, H. Scannell (2024) Modeling Coastal Flood Risk in a Changing Climate: Improvements to a Global Model. AGU Ocean Sciences Meeting, New Orleans, LA.	[Link]
2024	Climate Security Fellows, NPS	Rogers, J.S. (2024). Physical hazards affected by climate change. Climate Security Fellows, US Navy, Naval Postgraduate School, Monterey, CA.	[Link]



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Year	Meeting/Conference	Citation	Source
2023	EGU	Emmanouil, S., Langousis, A., Perry, E., Madaus, L., Hacker, J., & Anagnostou, E. N. (2024, April). The effects of extreme rainfall trends on compound flood risk: A case study over Greater Boston. In EGU General Assembly Conference Abstracts (p. 18244).	[Link]
2023	AGU	Perry, E., Madaus, L. & Hacker, J. (2023) Assessing the effects of climate change on flood risk estimates for urban coastal areas: A case study over Greater Boston. AGU 2023 Meeting, San Francisco, CA.	[Link]
2023	AGU	Weatherhead, E.C., Arnold, M., Hoffman, A., Yonan, C., Hampson, H.M., Purdy, M., Mansfield, J., & Evans, M. (2023). Principles and Examples of Climate Justice within the United Nations' Development Goals Framework.	[Link]
2023	AGU	Sain, S. R. (2023). Non-Stationarity and Uncertainty for Physical Climate Risk (Invited). AGU 2023 Meeting, San Francisco, CA.	[Link]
2023	AGU	Rogers, J., Maneta, M., Sain, S.R., Madaus, L., & Hacker, J. (2023). Both climate change and population change will affect global exposure to flooding. AGU 2023 Meeting, San Francisco, CA.	[Link]
2023	AGU	Maneta, M., Bigelow, D.G., Madaus, L., & Sain, S.R. (2023). Frequency of Low Streamflow Events Below Environmental Limits Increases Globally. AGU 2023 Meeting, San Francisco, CA.	[Link]
2023	Interdisciplinary Workshop on Weather and Climate Extremes	Hoffman, A., L. S. Sain,(2023), Climate risk analytics and extremes: Applications in the private sector and areas of open research. Interdisciplinary Workshop on Weather and Climate Extremes, Clemson, SC, 16-18 May.	[Link]
2023	AGU	Weatherhead, E. C. (2023). Towards a U.S. Framework for Continuity of Satellite Observations of Earth's Climate and for Supporting Societal Resilience. AGU 2023 Meeting, San Francisco, CA.	[Link]
2023	ASP Distinguished Lecture Series	Hofman, A. L. (2023). Data science and applied statistics in climate risk analysis. NCAR ASP Distinguished Lecture Series. Boulder, Colorado	[Link]
2023	AMS	Weatherhead, E.C. & Madaus, L. E. (2023). Pairing Climate Expertise with Open Data and Software to Maximize Climate Insights at Jupiter Intelligence. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Hacker, J. P. (2023). Toward Combined Physical and Transition Risk Assessment. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Hacker, J. P. (2023) Applying Socioeconomic Context To Weather, Water And Climate Data To Better Understand Our World Around Us. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Dhakal, R., Arnold, M., Evans, M., & Weatherhead, E.C. (2023). Climate Services for Sustainable Disaster Risk Management in Nepal. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Harr, P.A. & Turney, A. (2023) Projecting North Atlantic Tropical Cyclones Activity Using a Statistical Synthetic Storm Model. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Harr, P.A., Hacker, J.P. & Naviaux, J. (2023) Integration of Physical and Transition Risk for Complete Climate Risk Assessments. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Hampson, H.M., Perry, E., & Rogers, J. (2023). Automated Extraction of Hydrologically Consistent Sub-domains for Flood Model Simulations. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Weatherhead, E.C., Evans, M., Georgas, N., Hampson, H.M., & Hoffman, A. (2023). Climate Services to Help Conservation of Critical Ecosystems and Climate Change Adaptation in Colombia. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Harr, P.A. & Sain, S. (2023). A Fully Bayesian Spatial Copula Model for Joint Frequency Analysis of Extreme Events. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	Perry, E. (2023). A Highly Parallelizable Flooding Emulator. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	AMS	McNicholas, C. J. (2023). A Machine Learning Approach to Create Global Sub-Kilometer Climatologies for Downscaling Projections of Climate Extremes. AMS 2023 Meeting, Denver Colorado.	[Link]
2023	UC Irvine Climate Tech Seminar	Rogers, J.S. (2023). Modeling climate impacts at scale: How climate change-influenced floods will affect global populations. UC Irvine Climate Tech Seminar, Irvine CA.	[Link]
2023	Advancing Sustainable Urban Infrastructure Workshop, Stanford GSB	Rogers, J.S. (2023). How climate-change-influenced floods will affect global populations. Advancing Sustainable Urban Infrastructure Workshop, Stanford Graduate School of Business, Stanford, CA.	[Link]
2023	EGU	Kalra, T., Rogers, J., Dhakal, R., Hampson, H., Scannell, H., & Eilerman, S. (2023). Advancements in a Global Statistical Coastal Flood Modeling Framework, EGU General Assembly.	[Link]
2023	SIAM	Sain, S.R. (2023) Climate risk analytics and data science: Assessing risk in a changing climate (keynote). SIAM Front Range Student Conference, Denver, CO.	
2023	ISI	Sain, S.R. (2023) Sapital statistics, extremes, and climate risk analytics (invited). ISI World Congress. Ottawa, Canada.	
2023	TIES	Sain, S.R. (2023) Data science and the assessment of climate risk. TIES Webinar Series.	
2022	AGU	Scannell, H., Sain, S.R., & Rogers, J. (2022) Joint projections of coastal sea level and its uncertainty from storm surge, tides, and sea level rise. AGU 2022 Meeting, Chicago, IL.	[Link]
2022	AGU	Maneta, M., Daneshvar, F., Hampson, H., Perry, E., Madaus, L., Sain, S.R., Dhakal, R., Oyler, J., Kalra, T., Scannell, H., & Rogers, J. (2022). A scalable, cloud-based modeling framework for global-scale flood risk assessment. AGU 2022 Meeting, Chicago, IL.	[Link]



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2022	AGU	Daneshvar, F., Maneta, M., Hampson, H., Dhakal, R., Oyler, J., & Rogers, J. (2022). Computationally-efficient, High-Resolution Inland Flood Inundation Depth Prediction at the Regional Scale. AGU 2022 Meeting, Chicago, IL.	[Link]
2022	AGU	Rogers, J., Maneta, M., Sain, S.R., & Madaus, L. (2022). Effects of climate change on global flood impacts: insights from a coupled high-resolution coastal and fluvial flood model. AGU 2022 Meeting, Chicago, IL.	[Link]
2022	AGU	Perry, E., Rogers, J. & Hampson, H. (2022). An Automated Cloud-Based Flood Model Preprocessing Workflow. AGU 2022 Meeting, Chicago.	[Link]
2022	AGU	Weatherhead, E.C., & Blumberg, A.F. (2022). Assessing Reliability of Actionable Climate Risk Information: New Techniques and Approaches. AGU 2022 Meeting, Chicago, IL.	[Link]
2022	AGU	Weatherhead, E.C. (2022). Towards a U.S. Continuity Framework for Satellite Observations of Earth's Climate and to Support Societal Resilience. AGU 2022 Meeting, Chicago, IL.	[Link]
2022	JSM	Hoffman, A., L. S. Sain, J. Jacobson (2022), Data Science and Applied Statistics in Climate Risk Analysis , Industry Applications for Environmental Statistics - Topic Contributed Papers, presented at Joint Statistical Meeting 2022, JSM, Washington DC, 6-11 August.	[Link]
2022	AMS	Hacker, J.P. (2022). A Framework for Assessing Climate Risk Analytics. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Cipullo, M. L., Hacker, J.P., & Madaus, L.E. (2022). Estimating Future Projections of a Simplified Wet-Bulb Globe Temperature from CMIP6 Models. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Weatherhead, E.C. (2022). Update on Changes in Weather Persistence: Bridging Inuit Observations and Statistical Techniques. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Harr, P.A. & Sain, S. (2022). Comparison of Univariate and Bivariate Return Periods Using Stationary and Nonstationary Analyses. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Hoffman, A. & Madaus, L.E. (2022). Understanding Global Wildfire Risk across Historical and Future Scenarios in CMIP6. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Middlemas, E.A, Madaus, L.E., Hoffman, A.L., Sain, S.R. & Yacalis, G. (2022). Downscaling Global Heat Exposure Metrics to Subkilometer Resolutions. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Weatherhead, E.C., Blumberg, A. & Georgas, N. (2022). Verification and Validation of Climate Risk Products. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Weatherhead, E.C. (2022). Planning Climate Observations to Address Critical Challenges (Invited Presentation). AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Harr, P. A, Sain, S., Madaus, L.E. & Jordi, A. (2022). Future Changes in the Localized Risk of Extreme Wind Speeds due to Mixed Environmental Sources. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Middlemas, E.A. (2022). Artificial Intelligence for Subseasonal-to-Seasonal (S2S) Prediction. AMS 2022 Meeting, Houston TX.	[Link]
2022	AMS	Pullen, J. (2022). Forum on Climate-Linked Economics Part I. AMS 2022 Meeting, Houston TX.	[Link]
2022	ASA JSM	Sain, S.R. (2022) Improving pipelines for assessing flood hazard under climate change (invited). ASA JSM. Washington, D.C.	
2022	IMSI	Sain, S.R. (2022) Downscaling for climate risk analytics. Climate Model Evaluation and Uncertainty, IMSI, Chicago, IL.	
2022	ENVR	Sain, S.R. (2022) Data science and climate risk (invited). ENVR Workshop. Provo, UT.	
2022	AGU Ocean Sciences	Yin, J., Rogers, J.S. (2022). Correcting channel depth in coarse resolution geospatial datasets. AGU Ocean Sciences Meeting (remote).	[Link]
2021	AGU	Zarekarizi, M., Yu, M., Davies, I.P. , Yacalis, G., & Sain, S. R. (2021). Toward Improved Prediction of Flood Inundation Maps: Application of Long Short Term Memory Networks. AGU 2021 Meeting, New Orleans, LA.	[Link]
2021	AGU	Yu, M., Zarekarizi, M., & Yacalis, G. (2021). Analyzing the Performance of Long Short-Term Memory Networks for Capturing Extreme Streamflow. AGU 2021 Meeting, New Orleans, LA.	[Link]
2021	AGU	Kalra, T. (2021) Modeling the Dynamics of Salt Marsh Formation. AGU 2021 Meeting, New Orleans, LA.	[Link]
2021	AGU	Weatherhead, E.C. (2021). Homogenization of Critical Surface, In Situ and Satellite Observations for Long-Term Trend Evaluation. AGU 2021 Meeting, New Orleans, LA.	[Link]
2021	AGU	Weatherhead, E.C. (2021). SORCE/TSIS Overlap Analysis: Absolute Scale Comparison and Stability Estimate. AGU 2021 Meeting, New Orleans, LA.	[Link]
2021	AMS	Hoffman, A. L., Sain, S., & Jacobson, J. (2021). Flexible Python-Based Statistical Workflow for Flood Risk Estimates Applied across CMIP6 Models. AMS 2021 Virtual.	[Link]
2021	AMS	Hacker, J.P., Smith, C., Hoffman, A.L., & Jordi, A. (2021). From Operational to Planning: Fire and Fire Risk Predictions across Scales. AMS 2021 Virtual.	[Link]
2021	AMS	Weatherhead, E.C. (2021). A Community Effort to Unify Verification and Validation Efforts—Upcoming Metrics Workshop. AMS 2021 Virtual.	[Link]
2021	DOE A14ESP	Sain, S.R. (2021) Machine Learning and Climate Risk Assessments (invited). DOE A14ESP Workshop.	
2021	Monash Univ Dept of Econometrics and Business Statistics	Sain, S.R. (2021) Climate risk analytics and data science @ Jupiter Intelligence. Department of Econometrics and Business Statistics, Monash University, Melbourne, Aus (remote).	



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Year	Meeting/Conference	Citation	Source
2020	AGU	Blumberg, A.F. & Sorkin R. (2020). There is no vaccine for sea level rise. AGU 2020 Meeting, Virtual.	[Link]
2020	AGU	Hoffman, A., Sain, S.R., & Jacobson, J. (2020). Flexible methodology for hyperlocal flooding risk due to sea level rise. AGU 2020 Meeting, Virtual.	[Link]
2020	AGU	Zarekarizi, M., Madaus, L. & Sain, S.R. (2020). Global projections of extreme flood inundation depth and extent under climate change. AGU 2020 Meeting, Virtual.	[Link]
2020	AGU	Zarekarizi, M. (2020). Navigating a Nonacademic Research Career: Gain Tips and Insights on How to Stand Out from the Crowd. AGU 2020 Meeting, Virtual.	[Link]
2020	AGU	Yacalis, G. (2020). Assessing the potential of deep neural networks for emulating cloud superparameterization in climate models under real geography boundary conditions. AGU 2020 Meeting, Virtual.	[Link]
2020	AMS	Harr, P.A., Sain, S.R., & Madaus, L. (2020). Identifying Nonstationary Risk in an Era of Changing Environmental Perils. AMS 2020 Meeting, Boston.	[Link]
2020	AMS	Hoffman, A., Madaus, L., Pullen, J., & Hacker, J. (2020). Machine Learning Downscaling of Extreme Heat Events in New York City. AMS 2020 Meeting, Boston, MA.	[Link]
2020	AMS	Luna-Cruz, Y. (2020). Joint Session 62 - Women in the Tropics. Part III. AMS 2020 Meeting, Boston, MA.	[Link]
2020	AMS	Levin, E.L., Blumberg, A.F, Weatherhead, E.C., Rodriguez, V., Ramaswamy, V., & Saleh, F. (2020). Validating Flood Model Simulations Using Camera Information and Crowd Source Information. AMS 2020 Meeting, Boston, MA.	[Link]
2020	AGU Ocean Sciences	Rogers, J.S., E. Yang, S. Sain, A. Karspeck (2020). Correcting model bias in multiscale coastal storm surge models with climate change. poster presented at AGU Ocean Sciences Meeting, San Diego, CA.	[Link]
2020	International Conference on Climate Informatics	Groenke, B., Madaus, L., & Monteleoni, C. (2020, September). Climalign: Unsupervised statistical downscaling of climate variables via normalizing flows. In Proceedings of the 10th International Conference on Climate Informatics (pp. 60-66).	[Link]
2019	AGU	Harr, P., Sain, S.R., & Madaus, L. (2019). Identifying Non-Stationary Risk in an Era of Changing Environmental Perils. AGU 2019 Meeting, San Francisco, CA.	[Link]
2019	AGU	Ramaswamy, V. & Saleh, F (2019). An Efficient Approach for Generating Large Scale Unstructured Computational Mesh for 2-D Flood Models. AGU 2019 Meeting, San Francisco, CA.	[Link]
2019	AGU	Weatherhead, E.C. (2019). Satellite requirements for overlap: techniques and time needed to create a continuous data record. AGU 2019 Meeting, San Francisco, CA.	[Link]
2019	AMS	Harr, P. (2019). Reducing Risk and Increasing Resilience to High-Impact Events: Roles of the Weather, Water, and Climate Communities. AMS 2019 Meeting Phoenix, AZ.	[Link]
2019	AMS	Harr, P., & Sain, S.R. (2019). Analysis of Risk due to Compound Extreme Events in the Coastal Urban Environment. AMS 2019 Meeting Phoenix, AZ.	[Link]
2019	AMS	Hacker, J. (2019). Numerical Forecasts of Deep Convection in a Tropical Mountainous Environment in Support of the Colombian Civil Aviation Authority (Aerocivil). AMS 2019 Meeting Phoenix, AZ.	[Link]
2019	AMS	Weatherhead, E.C. (2019). Catalyzing Innovations With Observations: Building What We Need, Not What We Have. AMS 2019 Meeting Phoenix, AZ.	[Link]
2019	Climate and Weather Seminar, Lawrence Livermore NL	Rogers, J.S. (2019). Improving ocean model predictions for climate risk assesment. Climate and Weather Seminar, Lawrence Livermore National Lab, CA.	
2019	Dept of Civil & Env Engineering, UC Berkeley	Rogers, J.S. (2019). The urban ocean: coastal flooding in an uncertain climate. UC Berkeley, Department of Civil and Environmental Engineering, Berkeley, CA.	
2019	AGA Operations Conference	Sain, S.R. (2019). Machine learning for assessing non-stationary hazards and mitigating risk from extreme weather events. AGA Operations Conference. Nashville, TN	
2019	Harvard Data Science Initiative	Sain., S.R. (2019). Data science @ Jupiter. Harvard Data Science Initiative, Harvard University, Cambridge, MA.	
2019	UCB Dept of Applied Mathematics	Sain., S.R. (2019). Data science @ Jupiter. Department of Applied Mathematics, University of Colorado, Boulder, CO.	
2019	CSM Dept of Applied Mathematics & Statistics	Sain., S.R. (2019). Data science @ Jupiter. Department of Applied Mathematics and Statistics, Colorado School of Mines, Golden, CO.	
2018	AGU	Sain, S.R., Harr, P., Madaus, L., & Eilerman, S. (2018). High-resolution estimation of coastal flood risk. AGU Meeting 2018, Washington DC.	[Link]
2018	AGU	Kalra, T. (2018). Redistribution of particulate organic carbon following marsh lateral erosion in a back-barrier estuary. AGU Meeting 2018, Washington DC.	[Link]
2018	AGU	Madaus, L., Hacker, J., & Exby, J. (2018). Scalable, cloud-based WRF simulations and analysis with community climate and reanalysis datasets. AGU Meeting 2018, Washington DC.	[Link]
2018	AGU	Hacker, J. (2018). Enabling Transparency and Reproducibility in Geoscience Through Practical Provenance and Cloud-Based Workflows Posters. AGU Meeting 2018, Washington DC.	[Link]
2018	AGU	Hacker, J. (2018). Enabling Transparency and Reproducibility in Geoscience Through Practical Provenance and Cloud-Based Workflows I. AGU Meeting 2018, Washington DC.	[Link]



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2018	AGU	Saleh, F., Blumberg, A.F., Abedelmoust, A., Ditty, J., Exby, J., Eilerman, S., Harr, P., Jordi, A., Etherton, B., Georgas, N., Hacker, J., Karspeck, A.R., Madaus, L., & Sain, S.R. AGU Meeting 2018, Washington DC. (2018). Long Term Compound Coastal-Riverine Flood Hazards in a Changing Climate. AGU Meeting 2018, Washington DC.	[Link]
2018	AGU	Hacker, J., Madaus, L., Pullen, J.D., Sain, S.R., Pucciarelli, J., & McDermott, P. (2018). Urban Heat In The Future: A Scalable And Flexible System For Evaluating Changing Risks. AGU Meeting 2018, Washington DC.	[Link]
2018	AGU	Hacker, J. (2018). Emerging Data Science and Machine Learning Opportunities in the Weather and Climate Sciences. AGU Meeting 2018, Washington DC.	[Link]
2018	AGU	Weatherhead, E.C. & Karspeck, A. (2018). How Long Will It Take To Identify Trends In Tropical Cyclones? AGU Meeting 2018, Washington DC.	[Link]
2018	AGU	Saleh, F. & Weatherhead, E.C. (2018). Weather/Climate Ensembles and Downscaling Methodologies for Hydrologic Prediction Systems: Methods, Process Understanding, Applications, and Verification I Posters. AGU Meeting 2018, Washington DC.	[Link]
2018	AMS	Sahel, F. & Pullen, J. (2018). Working with Decision-Makers to Improve Energy-Water System Resiliency in the Lower Hudson River Basin. AMS 2018 Meeting, Austin, TX.	[Link]
2018	AMS	Jordi, A., Saleh, F., Georgas, N., Blumberg, A., Ramaswamy, V., (2018). Next Generation of Coastal Ocean Operational Systems: Street-Scale Flood Forecasts for the Urban Ocean in the New York-New Jersey Metropolitan Region. AMS 2018 Meeting, Austin, TX.	[Link]
2018	AMS	Weatherhead, E.C. (2018). Community Global Modeling: Next Generation Global Prediction System (NGGPS) and beyond: Improvements in Global Models, Key Components of Global Models and Statistical Techniques to Evaluate Those Improvements—Part I. AMS 2018 Meeting, Austin, TX.	[Link]
2018	AMS	Weatherhead, E.C. (2018). The New Weather Enterprise: Toward Better Public, Private, and Academic Collaborations. AMS 2018 Meeting, Austin, TX.	[Link]
2018	AMS	Weatherhead, E.C. (2018). Fostering Open Communication about Forecast Improvement (Invited Presentation). AMS 2018 Meeting, Austin, TX.	[Link]
2018	International Conference on Urban Climate	Blumberg, A. F. (2018). The Urban Ocean-A New Frontier (Invited Presentation). In 10th International Conference on Urban Climate/14th Symposium on the Urban Environment. AMS. City College New York, NY.	[Link]
2018	AMS Conference on Weather Analysis and Forecasting	Madaus, L., Hacker, J., & Exby, J. (2018). Cloud-Based WRF Downscaling Simulations at Scale Using Community Reanalysis and Climate Datasets. In 29th Conference on Weather Analysis and Forecasting/25th Conference on Numerical Weather Prediction. AMS.	

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Year	Publication	Citation	Source
2025	Nature Communications	Rogers, J. S., Maneta, M. M., Sain, S. R., Madaus, L. E., & Hacker, J. P. (2025). The role of climate and population change in global flood exposure and vulnerability. <i>Nature Communications</i> , 16(1), 1287.	[Link]
2024	Journal of Climate	Xi, Dazhi, Ning Lin, Renzhi Jing, Patrick Harr, Michael Oppenheimer, 2024: Uncertainties inherent from large-scale climate projections in the statistical downscaling projection of North Atlantic tropical cyclone activity. <i>J. Climate</i> , 37, 4421 – 4436	[Link]
2024	Natural Hazards	Nakamura, J., U. Lall, Y. Kushnir, and P. A. Harr, 2024: A saturated stochastic simulator: Synthetic U.S. Gulf coast tropical cyclone precipitation fields. <i>Nat. Hazards</i> , 120, 1295-1318.	[Link]
2024	Environmetrics	Rai, S., Hoffman, A., Lahiri, S., Nychka, D. W., Sain, S. R., and Bandyopadhyay S. (2024), “Fast parameter estimation of generalized extreme value distribution using neural networks,” <i>Environmetrics</i> , e2845	[Link]
2024	Natural Hazards	Ghanbari, M., Dell, T., Saleh, F. et al. (2024) Compounding effects of changing sea level and rainfall regimes on pluvial flooding in New York City. <i>Nat Hazards</i> 120, 6377–6400.	[Link]
2024	Weather and Forecasting	Cahill, J., Barnes, E. A., Maloney, E. D., Sain, S. R., Harr, P., & Madaus, L. (2024). Errors of Opportunity: Using Neural Networks to Predict Errors in the Global Ensemble Forecast System (GEFS) on S2S Time Scales. <i>Weather and Forecasting</i> , 39(12), 1817-1831.	[Link]
2023	CHANCE	Sain, S. (2023). Climate Risk Analytics. <i>CHANCE</i> , 36(1), 17–22.	[Link]
2022	Environmetrics	Sain, S. R. (2022), “Data science and climate risk analytics,” <i>Environmetrics</i> , e2749	[Link]
2022	Environmetrics	Kleiber, W., Sain, S., Madaus, L., and Harr, P. (2022), “Stochastic tropical cyclone precipitation field generation,” <i>Environmetrics</i> , e2766	[Link]
2022	Springer International Publishing	Harr, P. A., Jordi, A., & Madaus, L. (2022). Analysis of the future change in frequency of tropical cyclone-related impacts due to compound extreme events. In <i>Hurricane risk in a changing climate</i> (pp. 87-120). Cham: Springer International Publishing.	[Link]
2021	Water	Zarekarizi, M., Roop-Eckart, K. J., Sharma, S., & Keller, K. (2021). The FLOod Probability Interpolation tool (FLOPIT): A simple tool to improve spatial flood probability quantification and communication. <i>Water</i> , 13(5), 666.	[Link]
2021	Journal of Applied Meteorology and Climatology	Nakamura, J., U. Lall, Y. Kushnir, P. Harr, and K. McCreery, 2021: Early season hurricane risk assessment: Climate-conditioned HITS simulation of North Atlantic tropical storm tracks. <i>J. Appl. Meteor. and Climatology</i> , 60, 559-575.	[Link]
2020	Nature Communications	Zarekarizi, M., Srikrishnan, V., & Keller, K. (2020). Neglecting uncertainties biases house-elevation decisions to manage riverine flood risks. <i>Nature communications</i> , 11(1), 5361.	[Link]
2020	Urban Climate	Madaus, L., McDermott, P., Hacker, J., and Pullen, J. (2020). Hyper-local, efficient extreme heat projection and analysis using machine learning to augment a hybrid dynamical-statistical downscaling technique. <i>Urban Climate</i> , 32.	[Link]
2019	Hydrology Research	Saleh, F., Ramaswamy, V., Georgas, N., Blumberg, A. F., & Pullen, J. (2019). Inter-comparison between retrospective ensemble streamflow forecasts using meteorological inputs from ECMWF and NOAA/ESRL in the Hudson River sub-basins during Hurricane Irene (2011). <i>Hydrology Research</i> , 50(1), 166-186.	[Link]
2019	Bulletin of the American Meteorological Society	Jordi, A., Georgas, N., Blumberg, A., Yin, L., Chen, Z., Wang, Y., ... & Saleh, F. (2019). A next-generation coastal ocean operational system: Probabilistic flood forecasting at street scale. <i>Bulletin of the American Meteorological Society</i> , 100(1), 41-54.	[Link]
2019	Annals of the New York Academy of Sciences	Patrick, L., Solecki, W., Gornitz, V. M., Orton, P., & Blumberg, A. (2019). New York City panel on climate change 2019 report chapter 5: Mapping climate risk. <i>Annals of the New York Academy of Sciences</i> , 1439 (GSFC-E-DAA-TN66879).	[Link]
2019	Process Safety Progress	Kytomaa H.K., Boehm P., Osteraas J., et al. (2019). An integrated method for quantifying and managing extreme weather risks and liabilities for industrial infrastructure and operations. <i>Proc Safety Prog.</i> 2019; 38 (3).	[Link]
2018	Cambridge University Press	Blumberg, A. F., & Bruno, M. S. (2018). <i>The urban ocean: the interaction of cities with water</i> . Cambridge University Press.	[Link]