Emanuele Bevacqua

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Trained as a physicist, I lead the Emmy Noether group "Compound Climate Extremes" at the Helmholtz Centre for Environmental Research - UFZ, where we integrate observational data, large ensemble climate model simulations, and impact models to advance our understanding of high-impact compound weather and climate events. We study the physical drivers of the events, the effects of climate variability and climate change, and the potential for future worst-case, impactful outcomes.

Academic Appointments

Since 2024 **Emmy Noether Group Leader**.
Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany.

Since 2024 **Deputy Head of the *Compound Environmental Risks* department**.
Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany.

2021–2024 **Postdoctoral Researcher**.
Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany.

2019–2020 **Postdoctoral positions (Research Assistant, then Research Fellow)**.
Department of Meteorology, University of Reading, United Kingdom.

2018–2019 **Postdoctoral Research Scientist**.
Wegener Center for Climate and Global Change, University of Graz, Austria.

Qualifications

2025 **Scientific Habilitation for Full Professor (for Italy)**.
Disciplinary field of *Astronomy, astrophysics, Earth and planetary physics* (02/C1, Italy).

2018 **PhD (Dr. rer. nat) in Physics (Climate Science)**.
2016–2018: Wegener Center for Climate and Global Change, University of Graz, Austria.
2015: Laboratoire des Sciences du Climat et de l'Environnement, Gif-sur-Yvette, France.
2014-2015: GEOMAR – Helmholtz Centre for Ocean Research Kiel, Germany.
Thesis: *Multivariate statistical modelling and analysis of compound events*. Supervisor: Prof. Douglas Maraun.
Pass with distinction (Max Grade).

2014 **Master of Science in Physics (Astrophysics and Geophysics)**.
University of Calabria, Cosenza, Italy.
Cum laude (Max Grade), *and special honourable mention for the academic record.*

2012 **Bachelor's degree in Physics**.
University of Calabria, Cosenza, Italy.
Cum laude (Max Grade), *and special honourable mention for the academic record.*

Research stays

03/2019 **Laboratoire de Météorologie Dynamique (LMD)**, Paris, France. Short-term scientific mission within the DAMOCLES project.

06–12/2015 **Laboratoire des Sciences du Climat et de l'Environnement**, Gif-sur-Yvette, France. Statistical modelling for the CE:LLO project. Supervisor: Mathieu Vrac.

02/2015 **Norwegian Computing Center**, Oslo, Norway. Training in Pair-copula constructions. Supervisors: I. Hobaeck-Haff and A. Frigessi.

Selected publications

- Li, J., Zscheischler, J., and **Bevacqua, E.** (2026). "Emerging global record-shattering breadbasket droughts from regional moderately extreme events". Nature Communications 17, 2577.
- **Bevacqua, E.** et al. (2026). "Moderate global warming does not rule out extreme global climate outcomes". Nature, 651, 946–953.
- **Bevacqua, E.** et al. (2025). "A year above 1.5 °C signals that Earth is most probably within the 20-year period that will reach the Paris Agreement limit". Nature Climate Change, 15, 262–265.
- **Bevacqua, E.** et al. (2024). "Direct and lagged climate change effects intensified the 2022 European drought". Nature Geoscience, 17, 1100–1107.
- **Bevacqua, E.** et al. (2023). "Advancing research on compound weather and climate events via large ensemble model simulations", Nature Communications, 14, 2145.
- **Bevacqua, E.** et al. (2022). "Precipitation trends determine future occurrences of compound hot-dry events". Nature Climate Change, 12, 350–355.
- **Bevacqua, E.** et al. (2019). "Higher probability of compound flooding from precipitation and storm surge in Europe under anthropogenic climate change". Science Advances, 5(9), eaaw5531.

Grants and Awards

Major Grants

2024 PI, project "SEESAW: Societal and Environmental impacts of complex ExtremeS in a chAnging World", funded by the Helmholtz Centre for Environmental Research - UFZ. The project supports a cohort of four PhD students, with one directly supervised and another co-supervised by me (Project total ∼ 500,000 €, 3 years).

2023 Main PI, project "ADVICE: ADVancing the Investigation of Compound Events via large ensemble climate model simulations", funded by the DFG *Emmy Noether Programme*. The programme gives exceptionally qualified early career researchers the chance to qualify for the post of professor by leading an independent junior research group (∼ 1,500,000 €, 6 years).

2018 Secondary proposer, "DAMOCLES: UnDerstanding And Modeling cOmpound CLimate and weather EventS", COST Action (∼ 500,000 €, 4 years).

Other Awards and Recognitions

2026 Bevacqua et al. (Nature, 2026) featured in News & Views by *Nature*.

2025 Bevacqua et al. (Nature Climate Change, 2025), *CMIP Annual Report* highlight.

2022, 2025 Recognition for outstanding scientific performance and personal commitment, Helmholtz Centre for Environmental Research (UFZ).

2021 Bevacqua et al. (GRL, 2021) selected as Editors' Choice in *Science*.

2017 *Young Scientist Award* (sole recipient), SWGEN-Hydro Conference (∼800 €).

2013 *Graduate student grant*, TOSCA Training School (∼250 € + accommodation).

2012, 2014 *Merit Scholarship*, John R. Mott Scholarship Foundation (∼2,500 €).

2006 *Olympics of Mathematics*; Regional winner; National honourable mention.

Invited presentations (selected)

03/2026 "Compound climate events under global warming", 'Colloquium in Atmospheric and Climate Science', ETH Zurich, Switzerland.

01/2026 "Compound events in a changing climate" (Keynote), Workshop 'Dynamics of Rossby Waves, Compound Extremes and Their Impacts', Amsterdam, Netherlands.

12/2025 "High-impact compound climate events under global warming", '2025 UNESCO IHP EUROFRIEND Seminar/Training series'.

11/2023 "Compound weather and climate extreme events: a worst-case perspective", Workshop 'Exploring Unprecedented Extremes', Montreal, Canada (Delivered online).

10/2022 "A compound event perspective on extreme weather events" (Keynote), '4th International Atmospheric Rivers Conference', Santiago, Chile (Delivered online).

05/2022 "Studying diverse types of compound weather and climate events", Webinar of the Institute of Oceanology Chinese Academy of Sciences and Chinese Academy of Meteorological Sciences.

03/2022 "Advancing our understanding of summertime and wintertime compound events via SMILEs", Webinar series of the SMILE community.

02/2022 "Studying diverse types of compound weather and climate events", 'RSC4Earth Methods Seminar', Remote Sensing Centre for Earth System Research, Leipzig, Germany (Delivered online).

02/2022 "Guidelines for studying diverse types of compound weather and climate events", 'Multi-risk and flood seminar', Institute for Environmental Studies (IVM), Vrije Universiteit Amsterdam, Netherlands (Delivered online).

09/2021 "A compound event perspective on extreme weather events", Online workshop: 'Next Generation Challenges in Energy Climate modelling 2021'.

02/2021 "Projections of changes in meteorological events that drive compound coastal flooding", Online workshop, American Society of Civil Engineers.

11/2020 "Projections of the compound flooding potential from coastal processes and cyclone clusters", 'Colloquium in Climatology, Climate Impact and Remote Sensing', Institute of Geography, University of Bern (Delivered online).

10/2020 "More meteorological events that drive compound coastal flooding are projected under climate change at most locations worldwide", 'Risk-KAN Webinars', a joint initiative of the Future Earth, IRDR, WCRP and WWRP programs.

09/2020 "Global projections of meteorological drivers of compound coastal flooding", Workshop 'Mid-Latitude Compound Climate Extremes', Uppsala University, Sweden (*held virtually due to COVID*).

Teaching and Supervision

Teaching

04-07/2026 Lecturer, course "Current Topics in Earth System Science: Hydrological Modelling", MSc "Earth System Data Science and Remote Sensing", University of Leipzig, Germany.

03/2026 Guest lecturer, Cycle of seminars: Understanding and managing climate risk, Part of the doctoral programme, IUSS, Pavia, Italy. Lecture: "Compound extreme events in a changing climate".

09/2025 Lecturer (Invited), course "Climate Attribution", ECO-N and LGS-CAR Advanced Training Module, University of Leipzig, Germany. Lecture "Compound events in a changing climate" (prepared by me, delivered by a colleague due to illness).

04-07/2025 Lecturer, course "Current Topics in Earth System Science: Hydrological Modelling", MSc in Earth System Data Science and Remote Sensing, University of Leipzig, Germany.

09/2024 Lecturer, 3rd Como Training School on Compound climate-related Events, Lake Como School of Advanced Studies, Como, Italy. Lecture: "Introduction to Compound weather and climate events".

09/2022 Lecturer (Invited), 2nd Training School on Compound Events, Lake Como School of Advanced Studies, Italy. Lecture: "Introduction to Compound weather and climate events: definitions, fundamentals, and case studies".

07/2022 Lecturer (Invited), Training School on Dynamical Modelling of Compound Events, Budapest, Hungary. Lecture: "Compound weather and climate events: definitions, fundamentals, and case studies".

06/2022 Lecturer, Training school: Artificial Intelligence for Detection and Attribution of Climate Extremes (smr 3717), ICTP Trieste, Italy. Lecture: "Compound weather and climate extreme events".

02/2020 Co-examiner and co-lecturer, course "MTMG05: Professional Skills module", MSc in Meteorology, University of Reading. .

10/2019 Lecturer (Invited), Training School on Statistical Modelling of Compound Events, Lake Como School of Advanced Studies, Como, Italy. Lecture: "Physical processes driving compound flooding and its future changes".

Supervision

Since 2026 PhD candidate, Anton Schulte-Fischedick — Spatially compounding wildfire danger.

Since 2026 PhD candidate, Serkan Bayar — Attribution of compound weather events.

Since 2025 PhD candidate (co-supervised), Niklas Merz — Hydroclimate whiplash events.

2024-2025 PhD candidate, Emilie Gauthier — Wildfire danger in Europe.

2024-2025 Postdoctoral researcher, Ji Li — Record-shattering spatially compounding droughts.

Since 2023 PhD candidate, Yu Meng — Compounding effects in renewable energy droughts.

2023 Visiting scientist, Delei Li — Projections of compound wind-precipitation extremes.

2022-2024 Visiting PhD candidate, Sifang Feng — Crop failure dynamics and wildfire attribution.

2022 Visiting PhD candidate, Luis Gimeno-Sotelo — Drivers of precipitation changes.

2022-2025 Group project (7 PhD candidates) in Training school, continued until publication — The influence of modes of climate variability on compound events .

2019-2021 Group project (6 among PhD candidates/Postdocs) in Training school, continued until publication — Model evaluation of multivariate relationships via copulas .

IPCC and Scientific outreach

IPCC

Contributing Author to the IPCC Seventh Assessment Report (AR7), Working Group I, Chapter 3: Changes in regional climate and extremes, and their causes.

Scientific outreach

Frequent media commentator on climate science and extreme events, with appearances in international media (e.g., BBC, Financial Times, Bloomberg, Associated Press, Al Jazeera, Le Figaro, Der Spiegel, El Pais, La Repubblica, Público, Folha de S.Paulo) and scientific outlets (e.g., New Scientist, Sciences et Avenir, EOS-AGU, and Carbon Brief). Also interviewed by shows such as Sky News Australia, Radio Popolare within "Il Giusto Clima", and the "Co.Scienza" podcast, and contributed to climate-education videos and school educational materials.

Organisation of Scientific Events

Workshops, conference sessions, training schools, and seminars

04/2026 Co-convener, session "Compound weather and climate events", European Geosciences Union 2026 General Assembly, Vienna, Austria.

04/2025 Co-convener, session "Compound weather and climate events", European Geosciences Union 2025 General Assembly, Vienna, Austria.

09/2024 Co-Organiser, "3rd Como Training School on Compound climate-related Events", Lake Como School of Advanced Studies, Como, Italy, 24/09/2024-04/10/2024.

04/2024 Main convener, session "Compound weather and climate events", European Geosciences Union 2024 General Assembly, Vienna, Austria.

11/2023 Co-organiser, workshop "Compound events' research: next steps", Karlsruhe Institute of Technology, Karlsruhe, Germany; November 14-16th, 2023.

02/2023 Co-organiser, workshop "Compound event attribution", Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany; February 24-25th, 2023.

04/2023 Co-convener, session "Compound weather and climate events" European Geosciences Union 2023 General Assembly, Vienna, Austria.

06/2022 Co-Director, training school "Artificial Intelligence for Detection and Attribution of Climate Extremes (smr 3717)", ICTP Trieste, Italy, 20/06/2022-01/07/2022.

05/2022 Main convener, session "Compound weather and climate events", European Geosciences Union 2022 General Assembly, Vienna, Austria.

02/2022 Conveneer, session "Boosting (and/or rare event sampling) of compound events and global storylines", virtual workshop organised by the European project XAIDA.

10/2021 Organiser, workshop "Large ensemble simulations for compound event research", Paris, France, October 6-8 2021.

11/2020 Organiser, workshop "Bottom-up identification of key elements of compound events", Tirana, Albania (*held virtually due to COVID*), November 3-6 2020.

10/2020 Co-organiser, workshop "Using and reconciling statistical and process-based approaches for modelling compound events", Malta (*held virtually due to COVID*), October 21st, 22nd, and 27th, 2020.

2016-2019 Organiser, seminar series ("Challenges in Regional Climate Research") for the Reloclim group at the Wegener Center for Climate and Global Change, Austria.

12/2016 Moderator, T4Science seminar "How to ask good scientific questions? A panel discussion" at the University of Graz, Austria.

2012-2014 Co-organiser, seminar series for the CuboRisonante group at the Physics Department of the University of Calabria, Italy.

Management roles and Memberships

Since 2024 Manager, *CMIP* Data Workspace (EVE high-performance storage), Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany.

Since 2021 Affiliate member of the WCRP Safe Landing Climates Lighthouse Activity (scientific theme: Understanding High-risk Events).

2021-2023 Leader of the Working Group 4 ("New statistical approaches for model development and evaluation") of the COST action DAMOCLES (CA17109).

2019-2023 Management Committee member for the UK, COST action DAMOCLES.

2019-2020 Manager, Group Workspace *storycc* on the JASMIN computing infrastructure, UK.

2018-2019 Management Committee member substitute for Austria, COST action DAMOCLES.

2013-2015 Student representative, Physics Department, University of Calabria, Italy.

Computer and language skills

Computer

Programming languages: R, Bash; past experience with IDL, Fortran, C, C++.

Geophysical models: experience with the astronomical tide model FES, the regional climate model COSMO-CLM, and the mesoscale Hydrologic Model mHM.

Languages

Italian (mother tongue), English (fluent), German (intermediate), French (basic).

Appendix

Complete Publication List

Complete Publication List

2026
- Li, J., Zhang, Y., **Bevacqua, E.**, Jiang, S., Yuan, X., Zhou, S., Qiu, J., Wang, Z., Zscheischler, J., Wang, K., and Shilong Piao (2026). "Warming and vegetation greening drive recent surge in flash droughts". Science Advances, 12, eaea8452. DOI: 10.1126/sciadv.aea8452.
- Gauthier, E., and **Bevacqua, E.** (2026). "Human-induced climate change intensifies spatially compounding fire weather extremes across European countries". npj Natural Hazards, 3, 39. DOI: 10.1038/s44304-026-00201-y.
- **Bevacqua, E.**, Fischer, E., Sillmann, J., and Zscheischler, J. (2026). "Moderate global warming does not rule out extreme global climate outcomes". Nature, 651, 946–953. DOI: s41586-026-10237-9.
- Li, J., Zscheischler, J. , and **Bevacqua, E.** (2026). "Global record-shattering breadbasket droughts emerge from moderately extreme regional events". Nature Communications 17, 2577. DOI: s41467-026-70700-z.
- Nagpal, M., Heilemann, J., Klassert, C., **Bevacqua, E.**, Rakovec, O., Samaniego, L., Klauer, B., and Gawel, E. (2026). "Attribution of extreme weather event impacts on crop yields and economic damages to climate change". Environmental Research: Climate, 5 021001. DOI: 10.1088/2752-5295/ae541a.
- Feng, S., Zscheischler, J., Zengchao, H., Jägermeyr, J., Müller, C., **Bevacqua, E.** (2026). "The influence of spatial correlations in crop production on global crop failures in model simulations". Agricultural and Forest Meteorology, 379, 111021. DOI: 10.1016/j.agrformet.2026.111021.

2025
- Meng, Yu., Schmidt, J., Zscheischler, J., and **Bevacqua, E.** (2025). "Climate-driven compounding effects and historical trends in renewable electricity droughts in Europe". Applied Energy, 401, Part B, 126623.
- Fang, B., Rakovec, O., **Bevacqua, E.**, Kumar, R., and Zscheischler, J. (2025). "Diverging trends in large floods across Europe in a warming climate". Communications Earth & Environment volume 6, 717.
- François, B., Teber K., Brett, L., Leeding, R., Gimeno-Sotelo, L., Domeisen, D. I. V., Suarez-Gutierrez, L., and **Bevacqua, E.** (2024). "Concurrent modes of climate variability linked to spatially compounding wind and precipitation extremes in the Northern Hemisphere". Earth System Dynamics, 16, 1029–1051.
- Cache, T., **Bevacqua, E.**, Zscheischler, J., Müller-Thomy, H., and Peleg, N. (2025). "Simulating realistic design storms: a joint return period approach". Water Resources Research, 61, e2024WR039739.
- Yixuan Guo, Beyerle, U., **Bevacqua, E.**, Zscheischler, J., Suarez-Gutierrez, L., Mittermeier, M., Fu, Z., and Fischer, E. (2025), "European compound flood-heat-flood events associated with Omega patterns cannot be easily reproduced by a fully coupled model". Communications Earth & Environment, 6, 491.
- Messori, G., Muheki, D., Batibeniz, F., **Bevacqua, E.**, Suarez-Gutierrez, L., and Thiery, W. (2025). "Global mapping of concurrent hazards and impacts associated with climate extremes under climate change". Earth's Future, 13, e2025EF006325.

- Feng, S., Zscheischler, J., Hao, Z., and **Bevacqua, E.** (2025). "Growing human-induced climate change fingerprint in regional weekly fire extremes". npj Climate and Atmospheric Science 8, 152.
- **Bevacqua, E.**, Schleussner, C., and Zscheischler, J. (2025). "A year above 1.5 °C signals that Earth is most probably within the 20-year period that will reach the Paris Agreement limit". Nature Climate Change, 15, 262–265.

2024
- Li, J., Zhang, Y., **Bevacqua, E.**, Zscheischler, J., Keenan, T., Lian, X., Zhou, S., Zhang, H., He, M., and Piao, S. (2024). "Future increase in compound soil drought-heat extremes exacerbated by vegetation greening". Nature Communications, 15, 10875.
- Lembo, V., Bordoni, S., **Bevacqua, E.**, Domeisen, D. I. V., Franzke, C. L. E., Galfi, V. M., Garfinkel, C. I., Grams, C. M., Hochman, A., Jha, R., Kornhuber, K., Kwasniok, F., Lucarini, V.,, Messori, G., Pappert, D., Perez-Fernandez, I., Riboldi, J., Russo, E., Shaw, A. T., Strigunova, I., Strnad, F., Yiou, P., and Žagar, N. (2024). "Dynamics, Statistics, and Predictability of Rossby Waves, Heat Waves, and Spatially Compounding Extreme Events". Bulletin of the American Meteorological Society, 105, 12.
- **Bevacqua, E.**, Rakovec, O., Schumacher, D. L., Kumar, R., Thober, S., Samaniego, L., Seneviratne, S. I., and Zscheischler, J. (2024). "Direct and lagged climate change effects intensified the 2022 European drought". Nature Geoscience, 17, 1100–1107.
- Perkins-Kirkpatrick, S. E., Alexander, L. V., King, A. D., Kew, S., Philip, S. Y., Barnes, C., Maraun, D., Stuart-Smith, R., Jézéquel, A., **Bevacqua, E.**, Burgess, S., Fischer, E., Hegerl, G. C., Kimutai, J., Koren, G., Lawal, K. A., Min, S.-K., New, M., Odoulami, R. C., Patricola, C. M., Pinto, I., Ribes, A., Shaw, T. A., Thiery, W., Trewin, B., Vautard, R., Wehner, M., and Zscheischler, J. (2024). "Frontiers in attributing climate extremes and associated impacts". Frontiers in Climate, 6, 1455023.
- Jézéquel, A., Bastos, A., Faranda, D., Kimutai, J., Le Grix, N., Wilson, A. M., Rufat, S., Shepherd T. G., Stuart-Smith, T. F., Van Loon, A. F., **Bevacqua, E.**, D'Andrea, F., Lehner, F., Lloyd, E. A., Moemken, J., Ramos, A.M., Sippel, S., and Zscheischler, J. (2024). "Broadening the scope of anthropogenic influence in extreme event attribution". Environmental Research: Climate, 3, 042003.
- Fang, B., **Bevacqua, E.**, Rakovec, O., and Zscheischler, J. (2024). "An increase in the spatial extent of European floods over the last 70 years". Hydrol. Earth Syst. Sci., 28, 3755–3775.
- Banfi, F., **Bevacqua, E.**, Rivoire, P., Oliveira, S. C., Pinto, J. G., Ramos, A. M., and De Michele, C. (2024). "Temporal clustering of precipitation for detection of potential landslides". Natural Hazards Earth System Science, 24, 2689–2704.
- Matte, D., Christensen, J. H., Drew, M., Soboloski, S., Paquin, D., Lynch, A., Bremer, S., Engholm, I., Brunet, N. D., Kolstad, E. W., Kettleborough, H., Thompson, V., **Bevacqua, E.**, Heinrich, D., Pryor, S. C., Böhnisch, A., Feser, F., Prein, A. F., Fischer, E., and Leduc, M. (2024). "How to engage and adapt to unprecedented extremes". Bulletin of the American Meteorological Society, 105, 8, E1407–E1415.

- Li, D., Zscheischler, J., Chen, Y., Yin, B., Feng, J., Freund, M., Qi, J., Zhu, Y., and **Bevacqua, E.** (2024). "Intensification and poleward shift of compound wind and precipitation extremes in a warmer climate". Geophysical Research Letters, 51 (11), e2024GL110135.
- Muheki, D., Deijns, A. A. A., **Bevacqua, E.**, Messori, G., Zscheischler, J., and Thiery, W. (2024). "The perfect storm? Co-occurring climate extremes in East Africa", Earth System Dynamics, 15, 429–466.
- Gimeno-Sotelo, L., **Bevacqua, E.**, Fernández-Álvarez, J. C., Barriopedro, D., Zscheischler, J., Gimeno, L. (2024). "Projected changes in extreme daily precipitation linked to changes in precipitable water and vertical velocity in CMIP6 models". Atmospheric Research, 107413, .

2023
- Qian, C., Ye, Y., **Bevacqua, E.**, and Zscheischler, J. (2023). "Human influences on spatially compounding flooding and heatwave events in China and future increasing risks", Weather and Climate Extremes, 42, 100616.
- Richards, J., Huser, R.,**Bevacqua, E.**, and Zscheischler, J. (2023). "Insights into the Drivers and Spatiotemporal Trends of Extreme Mediterranean Wildfires with Statistical Deep Learning", Artificial Intelligence for the Earth Systems, vol. 2, no. 4.
- Gimeno-Sotelo, L., **Bevacqua, E.**, and Gimeno, L. (2023), "Combinations of drivers that most favor the occurrence of daily precipitation extremes", Atmospheric Research, 106959, 0169-8095.
- Li, J., **Bevacqua, E.**, Wang, Z. Sitch, S., Nabel, J., Arora, V., Arneth, A., Jain, A. K., Goll, D., Tian, H., and Zscheischler, J. (2023) "Hydroclimatic extremes contribute to asymmetric trends in ecosystem productivity loss", Communications Earth & Environment, 4, 197.
- **Bevacqua, E.**, Suarez-Gutierrez, L., Jezequel, A., Lehner, F., Vrac, M., Yiou, P., and Zscheischler, J. (2023). "Advancing research on compound weather and climate events via large ensemble model simulations", Nature Communications, 14, 2145.
- Manning, C., Widmann, M., Maraun, D., van Loon, A. F., and **Bevacqua, E.** (2023) "Large spread in the representation of compound long-duration dry and hot spells over Europe in CMIP5", Weather and Climate Dynamics, 4, 309–329.

2022
- Jiang, S., **Bevacqua, E.**, and Zscheischler, J. (2022) "River flooding mechanisms and their changes in Europe revealed by explainable machine learning", Hydrology and Earth System Sciences, 26, 6339–6359.
- Li, D., Chen, Y., Messmer, M., Zhu, Y., Qi, J., Feng, J., Yin, B., and **Bevacqua, E.** (2022). "Compound wind and precipitation extremes across the Indo-Pacific: climatology, variability and drivers". Geophysical Research Letters, 49, e2022GL098594.
- Li, J., **Bevacqua, E.**, Chen, C., Wang, Z., Chen, X., Myneni, R. B., Wu, X., Xu, C., Zhang, Z., and Zscheischler, J. (2022) "Regional asymmetry in the response of global vegetation growth to springtime compound climate events". Communications Earth & Environment, 3, 123.

- **Bevacqua, E.**, Zappa, G., Lehner, F., and Zscheischler, J. (2022). "Precipitation trends determine future occurrences of compound hot-dry events". Nature Climate Change, 12, 350–355.
- Maraun, D., Knevels, R., Mishra, A. N., Truhetz, H., **Bevacqua, E.**, Proske, H., Zappa, G., Brenning, A., Petschko, H., Schaffer, A., Leopold, P., and Puxley, L. (2022). "A severe landslide event in the Alpine foreland under possible future climate and land-use changes". Communications Earth & Environment, 3, 87.
- Switanek, M., Maraun, D., and **Bevacqua, E.** (2022). "Stochastic downscaling of gridded precipitation to spatially coherent sub-grid precipitation fields using a transformed Gaussian model". International Journal of Climatology, 42(12), 6126–6147.

2021
- **Bevacqua, E.**, De Michele, C., Manning, C., Couasnon, A., Ribeiro, A. F. S., Ramos, A. M., Vignotto, E., Bastos, A., Blesić, S., Durante, F., Hillier, J., Oliveira, S. C., Pinto, J. G., Ragno, E., Rivoire, P., Saunders, K., van der Wiel, K., Wu, W., Zhang, T., Zscheischler, J. (2021). "Guidelines for studying diverse types of compound weather and climate events". Earth's Future, 9, e2021EF002340.
- Villalobos-Herrera, R., **Bevacqua, E.**, Ribeiro, A.F.S., Auld, G., Crocetti, L., Mircheva, B., Ha, M., Zscheischler, J., and De Michele, C. (2021). "Towards a compound-event-oriented climate model evaluation: a decomposition of the underlying biases in multivariate fire and heat stress hazards". Natural Hazards and Earth System Sciences, 21, 1867–1885.
- **Bevacqua, E.**, Shepherd, T.G., Watson, P.A.G., Sparrow, S., Wallom, D., and Mitchell, D. (2020). "Larger spatial footprint of wintertime total precipitation extremes in a warmer climate". Geophysical Research Letters, 48, e2020GL091990.
- Zappa, G., **Bevacqua, E.**, and Shepherd, T. G. (2021): "Communicating potentially large but non-robust changes in multi-model projections of future climate", International Journal of Climatology, 41, 3657–3669.
- Messori, G., **Bevacqua, E.**, Caballero, R., Coumou, D., De Luca, P., Faranda, F., Kornhuber, K., Martius, O., Pons, F., Raymond, C., Ye, K., Yiou, P., and Zscheischler, J. (2021). "Compound climate events and extremes in the mid-latitudes: dynamics, simulation and statistical characterisation". Bulletin of the American Meteorological Society, 102(4), E774-E781.

2020
- **Bevacqua, E.**, Vousdoukas, M. I., Zappa, G., Hodges, K., Shepherd, T. G., Maraun, D., Mentaschi, L., and Feyen, L. (2020). "More meteorological events that drive compound coastal flooding are projected under climate change". Communications Earth & Environment, 1, 47.
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