

Dr. Mathias Vuille
Department of Atmospheric & Environmental Sciences (DAES)
University at Albany, State University of New York
ETEC Bldg. - Harriman Campus
1220 Washington Ave, Room 496
Albany, NY 12226, USA
Tel. (518) 442-4472
e-mail: mvuille@albany.edu
<http://www.atmos.albany.edu/facstaff/mathias/>

EDUCATION

1996 -1998	Senior Postdoctoral Research Associate, Univ. of Massachusetts, Amherst
1995	Ph.D. Physical Geography, Univ. of Bern, Switzerland
1991	M.S. Physical Geography, Univ. of Bern, Switzerland

EMPLOYMENT HISTORY

2025 - present	Distinguished Professor, Dept. Atmos. Environ. Sciences, Univ. at Albany.
2017 - 2025	Full Professor, Dept. Atmos. Environ. Sciences, Univ. at Albany.
2012 - 2016	Associate Professor, Dept. Atmos. Environ. Sciences, Univ. at Albany.
2008 - 2012	Assistant Professor, Dept. Atmos. Environ. Sciences, Univ. at Albany.
2004 - 2008	Research Associate Professor, Dept. Geosci., Univ. of Massachusetts, Amherst.
2000 - 2004	Research Assistant Professor, Dept. Geosci., Univ. of Massachusetts, Amherst.
1998 - 2000	Adjunct Assistant Professor, Dept. Geosci., Univ. of Massachusetts, Amherst.
1996	Research Associate, Swiss Academy of Sciences - ProClim, Bern.

ACADEMIC APPOINTMENTS

2022	Visiting Scientist, Oeschger Centre for Climate Change Research (OCCR), University of Bern, Switzerland
2016 - 2019	Science Leadership Council, Mountain Research Initiative (MRI)
2016 - 2018	Associate Editor, <i>Geophysical Research Letters</i>
2012 - 2018	U.S. National Committee (USNC), International Union for Quaternary Research (INQUA)
2005	NCCR Visiting Scientist, University of Bern, Switzerland

FELLOWSHIPS, HONORS & AWARDS

2026	University at Albany Torch Award Distinguished Nominee
2025	Elected Member of the Distinguished Academy of the State University of New York (SUNY)
2023	SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities
2022	University at Albany President's Award for Excellence in Research and Creative Activities
2018	University at Albany recognition for 'outstanding scholarly achievement'
2017	Université Joseph Fourier Visiting Professor Fellowship, Grenoble, France
2015	University at Albany Terra Award, for 'making a significant impact in furthering sustainability initiatives in research and sharing sustainability information with students in creative ways'
2014	FAPESP Visiting Professor Fellowship, University of Sao Paulo, Brazil
2011	Senior Fellow, Energy and Climate Partnership of the Americas (ECPA), Bureau of Western Hemisphere Affairs (WHA) and Science and Technology Adviser's Office (STAS), U.S. Department of State
2010	American Geophysical Union Editor's Citation for Excellence in Refereeing for <i>Geophysical Research Letters</i>
2006	American Geophysical Union Editor's Citation for Excellence in Refereeing for <i>Journal of Geophysical Research - Atmospheres</i>
1997	Swiss National Science Foundation Advanced Researcher Fellowship
1996	Swiss National Science Foundation Postdoctoral Fellowship

FUNDED RESEARCH

Career total: \$13.7M (\$10.9M as PI)

2025-2028	Role: Co-PI (PI Hsuan Lu Cheng, Univ. at Albany) Project: Utilizing water isotopic composition in the Unified Forecast System to constrain precipitation and hydrologic Processes (NA25OARX459C0343-T1-01) Source: NOAA-OAR Total Funding to UAlbany: \$825,163
2025-2029	Role: PI (collaborative proposal with Swiss SNF (PI Stefan Broennimann, Univ. Bern) Project: NSF-SNSF: Variability of Andean hydroclimate extremes - their precursors, predictability and interactions with large-scale dynamics (AGS-2438298) Source: NSF - Physical & Dynamical Meteorology (PDM) Total Funding to UAlbany: \$400,000

- 2024-2028 Role: PI (subawards to Co-PI's Bryan Mark (Ohio State Univ.) & Kristen Rasmussen (Colorado State Univ.)
Project: AccelNet Implementation Phase 1: Andean Climate Change: Observations, Research and Discovery- ACCORD (OISE - 2412205)
Source: NSF-OISE (AccelNet)
Total Funding to UAlbany: \$1,499,999
- 2024-2027 Role: PI
Project: An isotope-enabled data assimilation system for the Last Millennium over South America (AGS - 2402113)
Source: NSF- Paleo Perspectives on Present and Projected Climate (P4CLIMATE)
Total Funding to UAlbany: \$526,171
- 2023-2027 Role: PI (collaborative research with PI's Jason Smerdon & Lorenzo Polvani, Columbia Univ.)
Project: Collaborative Research: Diagnosing global climatic responses to large volcanic eruptions in climate reconstructions and model simulations (AGS-2303353)
Source: NSF- Paleo Perspectives on Present and Projected Climate (P4CLIMATE)
Total Funding to UAlbany: \$282,980
- 2022-2024 Role: PI
Project: Climate adaptation through process understanding, risk assessment, education, and public dialogue
Source: UAlbany Signature Strength Seed Funding
Total Funding to UAlbany: \$49,000
- 2021-2025 Role: PI (collaborative research with PI Bronwen Konecky (Washington Univ.) and Isla Castaneda (Univ. of Massachusetts))
Project: Collaborative Research: Quantitative reconstructions of last millennium hydroclimate and temperature from the tropical high Andes (EAR-2103041)
Source: NSF-Paleo-Perspectives on Climate Change (P2C2)
Total Funding to UAlbany: \$95,900
- 2020-2025 Role: Co-PI (PI Rob Rosenswig, Univ. at Albany)
Project: CNH2-L: Climate change and the coupled dynamics of tropical forest ecology and human food production (DEB-1923957)
Source: NSF-Dynamics of Integrated Socio-Environmental Systems (CNH2)
Total Funding to UAlbany: \$1,599,123
- 2018-2022 Role: PI (collaborative research with PI Laia Andreu-Hayles, Columbia Univ.)
Project: Collaborative Research: Reconstructing South American Monsoon sensitivity to internal and external forcing: Reconciling models and tree-ring proxies in the central Andes (AGS-1702439)
Source: NSF-Paleo-Perspectives on Climate Change (P2C2)
Total Funding to UAlbany: \$231,438

- 2017-2024 Role: PI (subaward to Co-PI Rosanne D'Arrigo, Columbia Univ.)
 Project: Climate Research and Education in the Americas using Tree-ring and speleothem Examples - PIRE-CREATE (OISE-1743738)
 Source: NSF-OISE (PIRE)
 Total Funding to UAlbany: \$4,997,208
- 2015-2016 Role: PI
 Project: Supplement to High-resolution reconstruction of the South American monsoon history from isotopic proxies and forward modeling (AGS-1523288)
 Source: NSF-Paleo-Perspectives on Climate Change (P2C2)
 Total Funding to UAlbany: \$58,330
- 2013-2017 Role: PI
 Project: High-resolution reconstruction of the South American monsoon history from isotopic proxies and forward modeling (AGS-1303828)
 Source: NSF-Paleo-Perspectives on Climate Change (P2C2)
 Total Funding to UAlbany: \$512,951
- 2013-2014 Role: Co-PI (PI Peter Shea, Univ. at Albany)
 Project: SUNY Collaboratory for Immersive Environments in STEM Learning II
 Source: SUNY System Office of the Provost
 Total Funding to UAlbany: \$52,800
- 2011-2016 Role: PI
 Project: Andean Climate Change Inter-American Observatory Network (ACCIÓN, S-LMAQM-11-GR-086)
 Source: Bureau of Western Hemisphere Affairs (WHA), U.S. Department of State
 Total Funding to UAlbany: \$1,071,622
- 2010-2014 Role: PI
 Project: Multi-scale analysis of stable isotope - climate relationships in tropical proxy records. (AGS-1003690)
 Source: NSF-Paleo-Perspectives on Climate Change (P2C2)
 Total Funding to UAlbany: \$289,574
- 2009-2012 Role: PI (collaborative research with PI James Russell, Brown University)
 Project: High-frequency variations in the Indian Ocean Dipole during the past millennium reconstructed from East African and Indonesian lake sediment cores (NA09OAR4310090)
 Source: NOAA-Climate Change Data Detection (CCDD)
 Total Funding to UAlbany: \$69,430
- 2008-2010 Role: PI
 Project: Impact and consequences of predicted climate change on Andean glaciation and runoff (EAR-0836215, transfer of funds from Univ. of Mass. to Univ. at Albany)
 Source: NSF-Hydrologic Sciences
 Total Funding to UAlbany: \$44,503

- 2006-2008 Role: PI
Project: Impact and consequences of predicted climate change on Andean glaciation and runoff (EAR-0519415)
Source: NSF-Hydrologic Sciences
Total Funding to Univ. of Mass.: \$217,602
- 2006-2011 Role: Co-PI (Lead PI B. Luckmann, Univ. of Western Ontario)
Project: Documenting, understanding and projecting changes in the hydrological cycle in the American Cordillera. (IAI-CRN II)
Source: Inter-American Institute for Global Change Research (IAI)
Total Funding: \$750,000 (no direct funding to Univ. of Mass.)
- 2003-2006 Role: PI
Project: Past and present climatic controls on the stable isotope composition of precipitation at low latitude proxy sites (ATM-0317693)
Source: NSF-Earth System History (ESH)
Total Funding to Univ. of Mass.: \$145,514
- 2003-2006 Role: PI
Project: Climatic conditions in East Africa and Arabia – Implications for paleoclimatic interpretations (NA030AR4310046)
Source: NOAA- Office of Global Programs (OGP)
Total Funding to Univ. of Mass.: \$237,390
- 2002-2005 Role: PI (collaborative research with PI Julio Betancourt, USGS / Univ. of Arizona)
Project: Past and modern variability in summer and winter rainfall on the Pacific slope of the central Andes (ATM-0214285)
Source: NSF-Earth System History (ESH)
Total Funding to Univ. of Mass.: \$53,319
- 2000-2002 Role: Co-PI (PI R.S. Bradley, Univ. of Mass.)
Project: Meteorological data acquisition: Mt. Kilimanjaro, Tanzania
Source: NSF-Paleoclimate
Total Funding to Univ. of Mass.: \$64,626
- 2000-2002 Role: Co-PI (PI R.S. Bradley, Univ. of Mass.)
Project: Stable isotope variability in precipitation at low-latitude sites: An observational and modeling study (ATM-9909201)
Source: NSF-Paleoclimate
Total Funding to Univ. of Mass.: \$187,548
- 1997-1999 Role: Co-PI (PI R.S. Bradley, Univ. of Mass.)
Project: Precipitation variability in the inter-tropical Andes - Climatological studies for paleoclimatic reconstruction (ATM-9707698)
Source: NSF-Climate Dynamics
Total Funding to Univ. of Mass.: \$107,848
- 1997-1999 Role: PI
Project: Climate Change in the tropical Andes (8220-050401)
Source: Swiss-NSF
Total Funding to Univ. of Mass.: \$52,670

1996-1997 Role: PI
 Project: Climate variability in the tropical and subtropical Andes
 Source: Swiss-NSF
 Total Funding to Univ. of Mass.: \$24,600

Consultancies

2015 Role: PI
 Project: The impact of glacier retreat in the Andes: International multidisciplinary network for adaptation strategies
 Source: UNESCO-International Hydrologic Program (IHP)
 Total Funding: \$1,500

2012 Role: PI
 Project: Water, glaciers, Andes (SR2012)
 Source: Inter-American Development Bank (IDB)
 Total Funding: \$10,000

2011 Role: PI
 Project: Melting glaciers in the Andes - Science and policy for adaptation to cope with complexity in the context of climate change
 Source: UNESCO-International Hydrologic Program (IHP)
 Total Funding: \$5,000

2006-2007 Role: PI
 Project: Design and Implementation of Climate Change Adaptation programs for the tropical Andes region
 Source: World Bank
 Total Funding: \$37,071

REFEREED PUBLICATIONS

(* denotes Student/Postdoc papers)

Submitted

Godoy-Veiga, M., G. Assis-Pereira, B.B.L. Cintra, R. Brienens, M.C.A. Torbenson, L. Andreu-Hayles, N.M. Strikis, M.H. Shimizu, F.W. Cruz, L. Regev, E. Boaretto, P.F.S.M. Buarque, A.C.M.C. Barbosa, R.M. Santos, V.F. Novello, M. Tomazzello-Filho, G.C.T. Ceccantini, V. Angyalossy, **M. Vuille** and G.M. Locosselli: Long-term exposure to increased VPD did not reduce tree growth of two widespread species at a tropical warming hotspot. (in review).

*Cheung, A.H., Z. Lyu, **M. Vuille**, and F.W. Cruz: Drivers of hydroclimate and oxygen isotope variability in tropical and subtropical South America during the Holocene. (in review).

*Lyu, Z., *A.H. Cheung, Y. Bao, F. Shi, H. Zhang, Z. Tian, S. Zhao, J. E. Smerdon, B.L. Konecky, F.S.R. Pausata, P. Hopcroft, J. Zhu, Q. Dalaiden, , Q. Yin, Z. Wu, A. Dallmeyer, S. Tiwari, G.M. Falster, A.N. LeGrande, Q. Wen, and **M. Vuille**: A mid-Holocene maximum of the Pacific Walker circulation. (in revision).

*Ishmam, Z.S., and **M. Vuille**: Tropical sea surface temperatures as precursors for black carbon deposition over the southern tropical Andes. (in review).

Accepted or Published

- 2026 (162) Olson, E.J., D.P. Gillikin, D. Parmenter, S. Burns, A. Verheyden, O. Miyawaki, **M. Vuille**, L.F. Piccirillo, R. Castro, G. Yurivilca, R.L. Edwards, and D.T. Rodbell, 2026: Interhemispheric monsoon dynamics over the past 450,000 years. *Nature* (in press).
- 2026 (161) *Ampuero, A., N. Strikis, A.N. Meckler, Y. Krüger, **M. Vuille**, H.B. Vonhof, L. Pasqualetto, V.C. Mayta, N.M. Medina Martinez, G. Utida, H. Zhang, H. Cheng, R.L. Edwards, L. Travassos, P. Piacsek, T. Akabane, and F.W. Cruz, 2026: Rapid warming events in tropical South America during the last deglacial. *Nature Commun.*, 17, 8068, doi:10.1038/s41467-026-74093-x.
- 2026 (160) Stansell, N.D., B.A. Steinman, **M. Vuille**, T. Shutkin, Z. Liu, J. Licciardi, B. Mark, M.B. Abbott, D.T. Rodbell, D. Sharma, and S. Turner, 2026: Simulating late Marine Isotope Stage 3 (MIS3) tropical South American climate responses to high latitude connections using the Community Earth System Model version 2 (CESM2). *Paleoceanogr. Paleoclimatol.*, 41, e2025PA005354, doi:10.1029/2025PA005354.
- 2026 (159) Cauhy, J., M.E. Della Libera, N. Strikis, **M. Vuille**, I.T. Pedron, V. Azevedo, F.W. Cruz, V.F. Novello, H. Vonhof and D. Scholz, 2026: A Holocene history of extreme rainfall events in southern Brazil. *Commun. Earth Environ.*, 7, 345, doi:10.1038/s43247-026-03506-y.
- 2026 (158) *Lyu, Z., F. Shi, Y. Yang, A. Dai, K. Tyle, D. Christie, M. Morales, E. Ferrero and **M. Vuille**, 2026: Pacific and Atlantic teleconnections reduce uncertainty in multidecadal projections of the South American summer monsoon. *npj Clim. Atmos. Sci.*, 9, 111, doi:10.1038/s41612-026-01373-0.
- 2026 (157) *He, Z., E. Tejedor, J.E. Smerdon, **M. Vuille**, L.V. Polvani R. Seager, and I. Sugiura, 2026: Comparison of global climatic responses to large tropical volcanic eruptions over the last millennium in paleoclimatic reconstructions and model simulations. *J. Climate*, 39, 1295-1313, doi:10.1175/JCLI-D-25-0179.1.
- 2025 (156) Vasconcelos, L.C., F.W. Cruz, J.P. Bernal, M.C. Campos, P. Piacsek, J.L. Campos, H. Zhang, N. Strikis, **M. Vuille**, G. Utida, C. Millo, R.L. Edwards and H. Cheng, 2025: The coupling between monsoon rainfall and sea surface temperature in the subtropical South Atlantic during the Last Glacial Period. *Global Planet. Change*, 255 105121, doi:10.1016/j.gloplacha.2025.105121.
- 2025 (155) *Turner, S., **M. Vuille** and A. Rabatel, 2025: Constraining future projections of freezing level height and equilibrium line altitudes in the tropical Andes based on CMIP6. *J. Geophys. Res. Atmos.*, 130, e2024JD042963, doi:10.1029/2024JD042963.
- 2025 (154) Sae-Lim, J. B.L. Konecky, J.A. Hutchings, N. Michelutti, C. Grooms, **M. Vuille**, I.S. Castañeda, and J.P. Smol, 2025: Biomarker evidence for arid intervals during the past ~1,800 years in the central Andean highlands. *Earth Planet Sc. Lett.*, 662, 119407, doi:10.1016/j.epsl.2025.119407.
- 2025 (153) Sulca, J.C, **M. Vuille**, K. Takahashi, P. Roundy, B. Dong, V. Mayta, J.C. Tacza Anaya and J. Apaéstegui, 2025: Multi-time scale analysis of the water level minima in Lake Titicaca over the past 103 years. *Front. Clim.*, 7, 1564040. doi:10.3389/fclim.2025.1564040.

- 2025 (152) Maksic, J., M.H. Shimizu, G. Sampaio, C.M. Chiessi, M. Prange, **M. Vuille**, G. Utida, F.W. Cruz, and M.R. Lemes, 2025: Simulated isotopic fingerprint of the Atlantic Multidecadal Oscillation over South America and its relation to the Little Ice Age. *Palaeogeogr. Palaeoclimatol. Palaeoecol.*, 659, 112629, doi:10.1016/j.palaeo.2024.112629
- 2025 (151) **Vuille, M.**, 2025: Ice core records from South America. In: Elias, S. (eds.) *Encyclopedia of Quaternary Science, 3rd Edition*. Vol. 3, pp. 310-323. UK: Elsevier. <https://doi.org/10.1016/B978-0-323-99931-1.00147-1>.
- 2024 (150) *Lyu, Z., **M. Vuille**, H. Goosse, R. Orrison, V.F. Novello, F.W. Cruz, J. Cauhy and N. M. Strikis, 2024: South American monsoon intensification during the last millennium driven by joint Pacific and Atlantic forcing. *Sci. Adv.* 10, eado9543, doi:10.1126/sciadv.ado9543
- 2024 (149) *Orrison, R., **M. Vuille**, J. Cauhy Rodrigues, N. Strikis, F. Cruz, M. Rodriguez-Caton, and L. Andreu Hayles, 2024: Pacific interannual and multidecadal variability recorded in $\delta^{18}\text{O}$ of South American Summer monsoon precipitation *J. Geophys. Res.*, 129(17), e2024JD040999, doi:10.1029/2024JD040999.
- 2024 (148) *He, Z., A. Dai, B.E.J. Rose and **M. Vuille**, 2024: Influence of the Pacific and Atlantic multidecadal variability on Arctic sea ice in pacemaker simulations during 1920-2013. *J. Climate*, 37(17), 4481-4506, doi:10.1175/JCLI-D-23-0520.1.
- 2024 (147) *Tejedor E., L.M. Polvani, N.J. Steiger, **M. Vuille**, and J.E. Smerdon:, 2024: No evidence of winter warming in Eurasia following large, low-latitude volcanic eruptions during the Last Millennium. *J. Climate*, 37, 5653-5673. doi:10.1175/JCLI-D-23-0625.1.
- 2024 (146) *He, Z., A. Dai and **M. Vuille**, 2024: Impacts of Atlantic and Pacific multidecadal variability on South American precipitation and temperature in CESM1 simulations and observations *J. Geophys. Res.*, 129, e2023JD039675, doi:10.1029/2023JD039675.
- 2024 (145) Rodriguez-Caton, M., M.S. Morales, M.P. Rao, T. Nixon, **M. Vuille**, J.A. Rivera, R. Oelkers, D.A. Christie, A.M. Varuolo-Clarke, M.E. Ferrero, T. Magney, V. Daux, R. Villalba, and L. Andreu-Hayles, 2024: A 300-year tree-ring $\delta^{18}\text{O}$ precipitation reconstruction for the South American Altiplano highlights decadal hydroclimate teleconnections. *Nature Commun. Earth Environ.*, 5, 269, doi:10.1038/s43247-024-01385-9.
- 2024 (144) Strikis, N.M, P.F.S.M. Buarque, F.W. Cruz, J.P. Bernal, **M. Vuille**, *E. Tejedor, M.S. Santos, M.H. Shimizu, A. Ampuero, W. Du, G. Sampaio, H.R. Sales, J.L. Campos, M.T. Kayano, J. Apaéstegui, R.R. Fu, H. Cheng, R.L. Edwards, V.C. Mayta, D.S. Francischini, M.A.Z. Arruda and V.F. Novello, 2024: Modern anthropogenic drought in Central Brazil unprecedented during last 700 years. *Nature Commun.*, 15, 1728, doi:10.1038/s41467-024-45469-8.
- 2023 (143) Ramirez, V.M., F.W. Cruz, **M. Vuille**, V.F. Novello, N.M. Strikis, H. Cheng, H.W. Zhang, J.P. Bernal, W.J. Du, A. Ampuero, M. Deininger, C.M. Chiessi, E. Tejedor, J.L. Campos, Y. Ait Brahimi, and R.L. Edwards, 2023: Summer insolation controlled movements of Intertropical Convergence Zone during last glacial cycle in northern South America. *Nature Commun. Earth Environ.*, 4(495), doi:10.1038/s43247-023-01124-6.

- 2023 (142) Utida, G., F.W. Cruz, **M. Vuille**, A. Ampuero, V.F. Novello, J. Maksic, G. Sampaio, H. Cheng, H. Zhang, F.R.D. de Andrade and R.L. Edwards, 2023: Spatiotemporal Intertropical Convergence Zone dynamics during the last 3 millennia in northeastern Brazil and related impacts in modern human history. *Clim. Past*, 19, 1975–1992, doi:10.5194/cp-19-1975-2023.
- 2023 (141) Apaéstegui, J., C. Romero, **M. Vuille**, J. Sulca and A. Ampuero, 2023: Moisture sources and rainfall $\delta^{18}\text{O}$ variability over the Central Andes of Peru – A case study from the Mantaro River Basin. *Water*, 15, 1867, doi:10.3390/w15101867.
- 2023 (140) Medina, N.M.M., F.W. Cruz, A. Winter, H. Zhang, A. Ampuero, **M. Vuille**, V.C. Mayta, M.C. Campos, V.M. Rámirez, G. Útida, A.C. Zúñiga, and H. Cheng, 2023: Atlantic ITCZ variability during the Holocene based on high-resolution speleothem isotope records from northern Venezuela. *Quaternary Sci. Rev.*, 307, 108056, doi:10.1016/j.quascirev.2023.108056.
- 2022 (139) Sulca, J., **M. Vuille**, and B. Dong 2022: Interdecadal variability of the austral summer precipitation over the Central Andes. *Frontiers Earth Sci.*, 10, 954954. doi: 10.3389/feart.2022.954954.
- 2022 (138) *Orrison, R., **M. Vuille**, J.E. Smerdon, J. Apaestegui, V. Azevedo, J.L.P.S. Campos, F.W. Cruz, M.E. Della Libera, and N.M. Strikis, 2022: South American Monsoon variability over the last millennium in paleoclimate records and isotope-enabled climate models. *Clim. Past*, 18, 2045–2062, doi:10.5194/cp-18-2045-2022.
- 2022 (137) Jimenez, A., A. Ampuero, B.G. Valencia, V.C. Mayta, F.W. Cruz, **M. Vuille**, V.F. Novello, N.M. Strikis, N. Aranda and B. Conicelli, 2022: Stable isotope variability of precipitation and cave drip-water at Jumandy cave, western Amazon River basin (Ecuador). *J. Hydrol.*, 610, 127848, doi:10.1016/j.jhydrol.2022.127848.
- 2022 (136) Antico, A., and **M. Vuille**: 2022: ENSO and Paraná flow variability: Long-term changes in their connectivity. *Int. J. Climatol.*, 42(14), 7269-7279, doi:10.1002/joc.7643.
- 2022 (135) Steinman, B.A., N.D. Stansell, M.E. Mann, C.A. Cooke, M.B. Abbott, **M. Vuille**, B.W. Bird, M.S. Lachniet and A. Fernandez, 2022: North-south antiphasing of neotropical precipitation over the past millennium. *Proc. Natl. Acad. Sci.*, 119(17), e2120015119, doi:10.1073/pnas.2120015119.
- 2022 (134) Segura, H., J.C. Espinoza, C. Junquas, T. Lebel, **M. Vuille**, and T. Condom, 2022: Extreme austral winter precipitation events over the South-American Altiplano: Regional atmospheric features. *Clim. Dynam.*, 59, 3069-3086, doi:10.1007/s00382-022-06240-1.
- 2022 (133) Jomelli, V., D. Swingedouw, **M. Vuille**, V. Favier, B. Goehring, J. Shakun, R. Braucher, I. Schimmelpfennig, L. Menviel, A. Rabatel, L.C.P. Martin, P.-H. Blard, T. Condom, M. Lupker, M. Christl, *Z. He, D. Verfaillie, A. Gorin, G. Aumaitre, D.L. Bourles and K. Keddadouche, 2022: In-phase millennial-scale glacier changes in the tropics and North Atlantic regions during the Holocene. *Nature Commun.*, 13, 1419, doi:10.1038/s41467-022-28939-9.

- 2022 (132) Della Libera, M.E., V.F. Novello, F.W. Cruz, *R. Orrison, **M. Vuille**, S.Y. Maezumi, J. de Souza, J.C. Rodriguez, J.L.P.S. Campos, A. Ampuero, G. Utida, N.M. Strikis, C. Fernandes Stumpf, V. Azevedo, H. Zhang, R.L. Edwards and H. Cheng, 2022: Paleoclimatic and paleoenvironmental changes in Amazonian lowlands over the last three millennia. *Quaternary Sci. Rev.*, 279, 107383, doi:10.1016/j.quascirev.2022.107383.
- 2022 (131) Pepin, N.C., E. Arnone, A. Gobiet, K. Haslinger, S. Kotlarski, C. Notarnicola, E. Palazzi, P. Seibert, S. Serafin, W. Schöner, S. Terzago, J.M. Thornton, **M. Vuille** and C. Adler, 2022: Climate changes and their elevational patterns in the mountains of the world. *Rev. Geophys.* 60, e2020RG000730, doi:10.1029/2020RG000730.
- 2022 (130) Rodriguez-Caton, M., L. Andreu-Hayles, V. Daux, **M. Vuille**, A. Varuolo-Clarke, R. Oelkers, D.A. Christie, R. D'Arrigo, M.S. Morales, M. Palat Rao, A.M. Srur, F. Vimeux and R. Villalba, 2022: Hydroclimate and ENSO variability recorded by oxygen isotopes from tree rings in the South American Altiplano. *Geophys. Res. Lett.*, 49, e2021GL095883, doi:10.1029/2021GL095883.
- 2022 (129) *Chimborazo, O., J.R. Minder and **M. Vuille**, 2022: Observations and simulated mechanisms of elevation-dependent warming over the tropical Andes. *J. Climate*, 35, 1021-1044. doi:10.1175/JCLI-D-21-0379.1.
- 2021 (128) *He, Z., A. Dai and **M. Vuille**, 2021: The joint impacts of Atlantic and Pacific multidecadal variability on South American precipitation and temperature. *J. Climate*, 34(19), 7959-7981. doi:10.1175/JCLI-D-21-0081.1.
- 2021 (127) Shahgedanova, M., C. Adler, A. Gebrekirstos, R. Grau, C. Huggel, R. Marchant, N. Pepin, V. Vanacker, D. Viviroli and **M. Vuille**, 2021: Mountain Observatories: Status and prospects to enhance and connect a global community. *Mountain Res. Devel.* 41(2), A1-A15, doi:10.1659/MRD-JOURNAL-D-20-00054.1.
- 2021 (126) *Tejedor E., N. Steiger, J.E. Smerdon, R. Serrano-Notivoli and **M. Vuille**, 2021: Global temperature response to tropical volcanic eruptions in paleo data assimilation products and climate model simulations over the last millennium. *Paleoceanogr. Paleoclimatol.*, 36, e2020PA004128, doi:10.1029/2020PA004128.
- 2021 (125) Azevedo, V., N.M. Strikis, V.F. Novello, C.L. Roland, F.W. Cruz, R.V. Santos, **M. Vuille**, G. Utida, F.R.D. de Andrade, H. Cheng and R.L. Edwards, 2021: Paleovegetation seesaw in Brazil since the Late Pleistocene: A multiproxy study of two biomes. *Earth Planet. Sc. Lett.*, 563, 116880, doi:10.1016/j.epsl.2021.116880.
- 2021 (124) *Tejedor E., N. Steiger, J.E. Smerdon, R. Serrano-Notivoli and **M. Vuille**, 2021: Global hydroclimate response to volcanic eruptions over the last millennium. *Proc. Natl. Acad. Sci.*, 118(12), e2019145118. doi:10.1073/pnas.2019145118.
- 2021 (123) Novello, V.F., F.W. Cruz, **M. Vuille**, J.L.P.S. Campos, N.M. Strikis, J. Apaéstegui, J.S. Moquet, V. Azevedo, A. Ampuero, G. Utida, X. Wang, G.M. Paula-Santos, P. Jaqueto, L.C.R. Pessenda, D.O. Breecker, and I. Karmann, 2021: Investigating $\delta^{13}\text{C}$ values in stalagmites from tropical South America for the last two millennia. *Quaternary Sci. Rev.*, 255, 106822, doi:10.1016/j.quascirev.2021.106822.
- 2021 (122) *Chimborazo, O., and **M. Vuille**, 2021: Present-day climate and projected future temperature and precipitation changes in Ecuador. *Theor. Appl. Climatol.*, 143, 1581–1597, doi:10.1007/s00704-020-03483-y.

- 2021 (121) Sulca, J.C., **M. Vuille**, O. Elison Timm, B. Dong, and R. Zubieta, 2021: Empirical-statistical downscaling of austral summer precipitation over South America during extreme El Niño episodes, with a focus on the central Andes of Peru and the equatorial Amazon basin. *J. Appl. Meteorol. Climatol.*, 60, 65-85. doi:10.1175/JAMC-D-20-0066.1.
- 2021 (120) Serrano-Notivoli, R., *E. Tejedor, P. Sarricolea, O. Meseguer-Ruiz, **M. Vuille**, M. Fuentealba, and M. de Luis, 2021: Hydroclimatic variability in Santiago (Chile) since the 16th century. *Int. J. Climatol.*, 41, (Suppl. 1), E2015– E2030. doi:10.1002/joc.6828.
- 2020 (119) Utida, G., F.W. Cruz, R.V. Santos, A.O. Sawakuchi, H. Wang, L.C.R. Pessenda, V.F. Novello, **M. Vuille**, A.M. Strauss, A.C. Borella, N.M. Strikis, C.C.F. Guedes, F.R.D. de Andrade, H. Zhang, H. Cheng and R.L. Edwards, 2020: Climate changes in Northeastern Brazil from Deglacial to Meghalayan periods and related environmental impacts. *Quaternary Sci. Rev.* 250, 106655, <https://doi.org/10.1016/j.quascirev.2020.106655>.
- 2020 (118) Masiokas, M.H., B.H. Luckman, **M. Vuille**, R. Villalba and G. Poveda, 2020: (Editorial) Observed and Predicted Changes in Climate in the Andes Cordillera. *Front. Environ. Sci.*, 8, 591996, doi: 10.3389/fenvs.2020.591996.
- 2020 (117) *Tejedor, E., R. Serrano-Notivoli, M. de Luis, M. Saz, C. Hartl, S. St. George, U. Büntgen, A. Liebhold, **M. Vuille** and J. Esper, 2020: A global perspective on the climate-driven growth synchrony of neighboring trees. *Global Ecol. Biogeogr.*, 29(7), 1114-1125, doi:10.1111/geb.13090.
- 2020 (116) Palacios, D., C.R. Stokes, F.M. Phillips, J.J. Clague, J. Alcalá-Reygosa, N. Andres, I. Angel, P.H. Bland, J.P. Briner, B.L. Hall, D. Dahms, A.S. Hein, V. Jomelli, B.G. Mark, M.A. Martini, P. Moreno, J. Riedel, E. Sagredo, N.D. Stansell, L. Vazquez-Selem, **M. Vuille** and D.J. Ward, 2020: The deglaciation of the Americas during the Last Glacial Termination. *Earth Sci. Rev.*, 203, 103113, doi:10.1016/j.earscirev.2020.103113.
- 2020 (115) Ampuero, A., N.M. Strikis, J. Apaéstegui, **M. Vuille**, V.F. Novello, J.C. Espinoza, F.W. Cruz, H. Vonhof, V.C. Mayta, V.T.S. Martins, R.C. Cordeiro, V. Azevedo and A. Sifeddine, 2020: The forest effects on the isotopic composition of rainfall in the northwestern Amazon Basin. *J. Geophys. Res.: Atmospheres*, 125, e2019JD031445.
- 2020 (114) *Segura, H., J.C. Espinoza, C. Junquas, T. Lebel, **M. Vuille** and R. Garreaud, 2020: Recent changes in the precipitation-driving processes over the southern tropical Andes/western Amazon. *Clim. Dynam.*, 54, 2613–2631, doi:10.1007/s00382-020-05132-6.
- 2019 (113) Azevedo, V., N.M. Strikis, R.A. Santos, J. Gregorio de Souza, A. Ampuero, F.W. Cruz, P. de Oliveira, J. Iriarte, C.F. Stumpf, **M. Vuille**, V.R. Mendes, H. Cheng, R.L. Edwards, 2019: Medieval climate variability in the eastern Amazon-Cerrado regions and its archeological implications. *Sci. Rep.*, 9, 20306, doi:10.1038/s41598-019-56852-7.
- 2019 (112) Rodysill, J.R., J.M. Russell, **M. Vuille**, S. Dee, B. Lunghino and S. Bijaksana, 2019: La Niña-driven flooding in the Indo-Pacific warm pool during the past millennium. *Quatern. Sci. Rev.*, 225, 106020. doi:10.1016/j.quascirev.2019.106020.

- 2019 (111) Novello, V.F., F.W. Cruz, M.M. McGlue, C.I. Wong, B.M. Ward, **M. Vuille**, R.A. Santos, P. Jaqueto, L.C.R. Pessenda, T. Atorre, L.M.A.L. Ribeiro, I. Karmann, E.S. Barreto, H. Cheng, R.L. Edwards, M.S. Paula, and D. Scholz, 2019: Vegetation and environmental changes in tropical South America from the last glacial to the Holocene documented by multiple cave sediment proxies. *Earth Planet Sci. Lett.*, 524, doi:10.1016/j.epsl.2019.115717.
- 2019 (110) Campos, J.L.P.S., F.W. Cruz, T. Ambrizzi, M. Deininger, **M. Vuille**, V.F. Novello and N.M. Strikis, 2019: Coherent South American Monsoon variability during the Last Millennium revealed through high-resolution proxy records. *Geophys. Res. Lett.*, 46, 8261–8270. doi:10.1029/2019GL082513.
- 2019 (109) Keyel, A.C., O. Elison Timm, P.B. Backenson, C. Prussing, S. Quinones, K. McDonough, **M. Vuille**, J.E. Conn P.M. Armstrong, T.G. Andreadis and L. Kramer, 2019: Seasonal temperatures and hydrological conditions improve the prediction of West Nile virus infection rates in Culex mosquitoes and human case counts in New York and Connecticut. *PLoS ONE*. 14(6): e0217854.
- 2019 (108) Utida, G., F.W., Cruz, J. Etourneau, I. Bouloubassi, E. Schefuss, **M. Vuille**, V.F. Novello, L.F. Prado, A. Sifeddine, V. Klein, A. Zular, J.P. Viana and B. Turcq, 2019: Tropical South Atlantic influence on Northeastern Brazil precipitation and ITCZ displacement during the past 2,300 years. *Sci. Rep.*, 9, 1698, <https://doi.org/10.1038/s41598-018-38003-6>
- 2019 (107) *Hurley, J.V., **M. Vuille** and D.R. Hardy, 2019: On the interpretation of the ENSO signal embedded in the stable isotopic composition of Quelccaya Ice Cap, Peru. *J. Geophys. Res.* 124, 131-145, doi: 10.1029/2018JD029064.
- 2019 (106) *Segura, H., C. Junquas, J.C Espinoza, **M. Vuille**, Y.R. Jauregui, A. Rabatel, T. Condom and T. Lebel, 2019: New insights into the rainfall variability in the tropical Andes on seasonal and interannual time scales. *Clim. Dyn.*, 53, 405-426, doi: 10.1007/s00382-018-4590-8.
- 2018 (105) *Sulca, J., **M. Vuille**, P. Roundy, K. Takahashi, J-C. Espinoza, Y. Silva, G. Trasmonte and R. Zubieta, 2018: Climatology of extreme cold events in the central Peruvian Andes during austral summer: Origin, types and teleconnections. *Q. J. Roy. Met. Soc.*, 144, 2693-2714. doi:10.1002/qj.3398.
- 2018 (104) *Yarleque, C., **M. Vuille**, D.R. Hardy, O. Elison Timm, J. de la Cruz, H. Ramos and A. Rabatel, 2018: Projections of the future disappearance of the Quelccaya Ice Cap in the Central Andes. *Sci. Rep.* 8:15565, doi:10.1038/s41598-018-33698-z.
- 2018 (103) Zular, A., G. Utida, F.W. Cruz, A.O. Sawakuchi, H. Wang, M. Bicego, P.C.F. Giannini, S.I. Rodrigues, G.P.B. Garcia, **M. Vuille**, A. Sifeddine, R. Zocatelli, B. Turcq and V.R. Mendes, 2018: The effects of mid-Holocene fluvio-eolian interplay and coastal dynamics on the formation of dune-dammed lakes in NE Brazil. *Quatern. Sci. Rev.* ,196, 137-153.
- 2018 (102) *Dong, B., A. Dai, **M. Vuille**, and O. Elison-Timm, 2018: Asymmetric Modulation of ENSO teleconnections by the Interdecadal Pacific Oscillation. *J. Climate*, 31, 7337-7361.

- 2018 (101) Novello, V.F., F.W. Cruz, J.S. Moquet, **M. Vuille**, M.S. de Paula, D. Nunes, R.L. Edwards, H. Cheng, I. Karmann, G. Utida, N.M. Strikis and J.L.P.S. Campos, 2018: Two millennia of South Atlantic Convergence Zone variability reconstructed from isotopic proxies. *Geophys. Res. Lett.*, 45, 5045-5051, doi:10.1029/2017GL076838.
- 2018 (100) Apaéstegui, J., F. Cruz, **M. Vuille**, J. Fohlmeister, J.C. Espinoza, A. Sifeddine, N. Strikis, J.-L. Guyot, R. Ventura, H. Cheng and R.L. Edwards, 2018: Precipitation changes over the eastern Bolivian Andes inferred from speleothem ($\delta^{18}\text{O}$) records for the last 1400 years. *Earth Planet. Sc. Lett.*, 494, 124-134.
- 2018 (99) **Vuille**, M., 2018: Current state and future challenges in stable isotope applications of the tropical hydrologic cycle (*Invited Commentary*). *Hydrol. Process.*, 32, 1313-1317, doi:10.1002/hyp.11490.
- 2018 (98) Strikis, N.M., F.W. Cruz, E.A. de Souza Barreto, F. Naughton, **M. Vuille**, H. Cheng, A.H.L. Voelker, H. Zhang, I. Karmann, R.L. Edwards, A.S. Auler, R.S. Ventura and H. dos Reis Sales, 2018: South American monsoon response to iceber discharge in the North Atlantic. *Proc. Natl. Acad. Sci.*, 115(15), 3788-3793.
- 2018 (97) **Vuille**, M., M. Carey, C. Huggel, W. Buytaert, A. Rabatel, D. Jacobsen, A. Soruco, M Villacis, *C. Yarleque, O. Elison-Timm, T. Condom, N. Salzmann and J.E. Sicart, 2018 (*Invited Review*): Rapid decline of snow and ice in the tropical Andes – Impacts, uncertainties and challenges ahead. *Earth Sci. Rev.*, 176, 195-213.
- 2018 (96) *Sulca, J., K.Takahashi, J.-C. Espinoza, **M. Vuille**, and W. Lavado, 2018: Impacts of different ENSO flavors and tropical Pacific convection variability (ITCZ, SPCZ) on austral summer rainfall in South America, with a focus on Peru. *Int. J. Climatol.*, 38, 420-435.
- 2017 (95) Huss, M., B. Bookhagen, C. Huggel, D. Jacobsen, R.S Bradley, J.J. Clague, **M. Vuille**, W. Buytaert, D.R. Cayan, G. Greenwood, B.G. Mark, A.M. Milner, R. Weingartner and M. Winder, 2017: Towards mountains without permanent snow and ice. *Earth's Future* 5, doi:10.1002/2016EF000514.
- 2017 (94) Lapointe, F., P. Francus, S.F. Lamoureux, **M. Vuille**, J-P. Jenny and R.S. Bradley, 2017: Influence of North Pacific decadal variability on the western Canadian Arctic over the past 700 years. *Clim. Past*, 13, 411-420.
- 2017 (93) Jomelli, V., L. Martin, P.H. Blard, V. Favier, **M. Vuille**, and J.L. Ceballos, 2017: Revisiting the Andean tropical glacier behavior during the Antarctic cold reversal. *Cuadernos de Investigación Geográfica*, 43(2), 629-648.
- 2017 (92) Novello, V.F., F.W. Cruz, **M. Vuille**, N.M. Strikis, R.L. Edwards, H. Cheng, S. Emerick, M.S. de Paula, X. Li, E.S. Barreto, I. Karmann, and R.V. Santos, 2017: A high-resolution history of the South American Monsoon from Last Glacial Maximum to the Holocene. *Sci. Rep.*, 7, 44267, doi:10.1038/srep44267.
- 2016 (91) *Yarleque, C., **M. Vuille**, D.R. Hardy, A. Posadas and R. Quiroz 2016: Multi-scale assessment of spatial precipitation variability over complex mountain terrain using a high-resolution spatiotemporal wavelet reconstruction method. *J. Geophys. Res.* 121(12), 12198-12216, doi:10.1002/2016JD025647.
- 2016 (90) *Colose, C.M., A.N. LeGrande and **M. Vuille**, 2016: Hemispherically asymmetric volcanic forcing of tropical hydroclimate during the last millennium. *Earth. Syst. Dyn.* 7, 681-696.

- 2016 (89) Rojas, M., P. A. Arias, V. Flores-Aqueveque, A. Seth and **M. Vuille**, 2016: The South American Monsoon variability over the last millennium in climate simulations. *Clim. Past*, 12, 1681-1691.
- 2016 (88) *Hurley, J.V., **M. Vuille** and D.R. Hardy, 2016: Forward modeling of $\delta^{18}\text{O}$ in Andean ice cores. *Geophys. Res. Lett.*, 43(15), 8178-8188,, doi:10.1002/2016GL070150.
- 2016 (87) Bustamante, M.G., F.W. Cruz, **M. Vuille**, J. Apaestegui, N. Strikis, G. Panizo, V.F. Novello, M. Deininger, A. Sifeddine, H. Cheng, J.S. Moquet, J.L. Guyot, R.V. Santos, H. Segura, and R.L. Edwards, 2016: Holocene changes in monsoon precipitation in the Andes of NE Peru based on $\delta^{18}\text{O}$ speleothem records. *Quat. Sci. Rev.*, 146, 274-287.
- 2016 (86) Novello, V.F., **M. Vuille**, F.W. Cruz, N.M. Strikis, M.S. de Paula, R.L. Edwards, H. Cheng, I. Karmann, P.F. Jaqueto, R.I. F. Trindade, G.A. Hartmann, and J.S. Moquet, 2016: Centennial-scale solar forcing of the South American Monsoon System recorded in stalagmites. *Sci. Rep.*, 6, 24762, doi:10.1038/srep24762.
- 2016 (85) *Colose, C.M., A.N. LeGrande and **M. Vuille**, 2016: The influence of volcanic eruptions on the climate of tropical South America during the last millennium in an isotope-enabled GCM. *Clim. Past*, 12, 961-979.
- 2016 (84) Flantua, S.G.A., H. Hooghiemstra, **M. Vuille**, H. Behling, J.F. Carson, W.D. Gosling, I Hoyos, M.P. Ledru, E. Montoya, F. Mayle, A. Maldonado, V. Rull, M.S. Tonello, B.S. Whitney and C. González-Arango, 2016: Climate variability and human impact in South America during the last 2000 years: synthesis and perspectives from pollen records. *Clim. Past*, 12, 483-523.
- 2016 (83) Moquet, J.S., F.W. Cruz, *V.F. Novello, N.M. Strikis, M. Deininger, I. Karmann, R. Ventura Santos, C. Millo, J. Apaestegui, J.-L. Guyot, A. Sifeddine, **M. Vuille**, H. Cheng, L. Edwards, and W. Santini, 2016: Calibration of speleothem $\delta^{18}\text{O}$ records against hydroclimate instrumental records in Central Brazil. *Global Planet. Change*, 139, 151-164.
- 2016 (82) *Sulca, J., **M. Vuille**, Y. Silva and K. Takahashi, 2016: Teleconnections between the Peruvian central Andes and Northeast Brazil during extreme rainfall events in austral summer. *J. Hydrometeorol.*, 17, 499-515.
- 2016 (81) **Vuille, M.**, *E. Franquist, R. Garreaud, W. Lavado and B. Caceres, 2015: Impact of the global warming hiatus on Andean temperature. *J. Geophys. Res.*, 120(9), 3745-3757, doi:10.1002/2015JD023126.
- 2015 (80) *Hurley, J.V., **M. Vuille**, D.R. Hardy, S. Burns, and L.G. Thompson, 2015: Cold air incursions, $\delta^{18}\text{O}$ variability and monsoon dynamics associated with snow days at Quelccaya Ice Cap, Peru. *J. Geophys. Res.*, 120, 7467-7487, doi:10.1002/2015JD023323.
- 2015 (79) *Slawsky, L., L. Zhou, S.B. Roy, G. Xia, **M. Vuille** and R.A. Harris, 2015: Observed thermal impacts of wind farms over northern Illinois. *Sensors*, 15, 14981-15005; doi:10.3390/s150714981.
- 2015 (78) Rangwala, I., N. Pepin, **M. Vuille** and J.R. Miller, 2015: Influence of climate variability and large-scale circulation on the mountain cryosphere. In: C. Huggel, M. Carey, J. Clague and A. Kääb (Eds.): “*The High-Mountain Cryosphere*,” Cambridge University Press, p.9-27.

- 2015 (77) Strikis, N.M., C.M. Chiessi, F.W Cruz, **M. Vuille**, H. Cheng, E.A. de Sousa Barreto, G. Mollenhauer, S. Kasten, I. Karmann, R.L. Edwards, J.P. Bernal and H. dos Reis Sales, 2015: Timing and structure of Mega-SACZ events during Heinrich Stadial 1. *Geophys. Res. Lett.*, 42, 5477-5484, doi:10.1002/2015GL064048.
- 2015 (76) Michelutti, N., A.P. Wolfe, C.A. Cooke, W.O. Hobbs, **M. Vuille**, and J.P. Smol, 2015: Climate change forces new ecological states in tropical Andean lakes. *PLoS ONE*, 10(2), e0115338, doi:10.1371/journal.pone.0115338.
- 2014 (75) *Konecky, B.L., J.M. Russell, **M. Vuille** and K. Rehfeld, 2014, (*Invited review*): The Indian Ocean Zonal Mode over the past millennium in observed and modeled precipitation isotopes. *Quat. Sci. Rev.*, 103, 1-18.
- 2014 (74) *Konecky, B.L., J.M. Russell, Y. Huang, **M. Vuille**, L. Cohen and F.A. Street-Perrott, 2014: Impact of monsoons, temperature and CO₂ on the rainfall and ecosystems of Mt. Kenya during the Common Era. *Palaeogeogr. Palaeoclimatol. Palaeoecol.*, 396, 17-25.
- 2014 (73) Apaéstegui, J., F.W. Cruz, A. Sifeddine, **M. Vuille**, J.C. Espinoza, J.L. Guyot, M., Khodri, N. Strikis, R.V. Santos, H. Cheng, L. Edwards, E. Carvalho, and W. Santini 2014: Hydroclimate variability of the northwestern Amazon basin near the Andean foothills of Peru related to the South American Monsoon System during the last 1600 years. *Clim. Past*, 10, 1967-1981.
- 2014 (72) Jomelli, V., V. Favier, **M. Vuille**, R. Braucher, L. Martin, P-H. Blard, *C. Colose, D. Brunstein, F. He, M. Khodri, D.L. Bourlès, L. Leanni, V. Rinterknecht, D. Grancher, B. Francou, J.L. Ceballos, H. Fonseca, Z. Liu and B. Otto-Bliesner, 2014: A major advance of tropical Andean glaciers during the Antarctic Cold Reversal. *Nature*, 513, 224-228.
- 2014 (71) Schauwecker, S., M. Rohrer, D. Acuña, A. Coachin, L. Dávila, H. Frey, C. Giráldez, J. Gómez, C. Huggel, M. Jacques-Coper, E. Loarte, N. Salzmann and **M. Vuille**, 2014: Climate trends and glacier retreat in the Cordillera Blanca, Peru, revisited. *Global Planet. Change*, 19, 85-97.
- 2014 (70) Roman-Cuesta, R.M., C. Carmona-Moreno, G. Lizcano, M. New M. Silman, T. Knoke, Y. Malhi, I. Oliveras, H. Asbjornsen, and **M. Vuille**, 2014: Synchronous fire activity in the tropical high Andes: an indication of regional climate forcing. *Global Change Biol.*, 20, 1929-1942.
- 2014 (69) Lapenis, A.G., H. Henry, **M. Vuille** and J. Mower, 2014: Climatic factors controlling plant sensitivity to warming. *Climatic Change*, 122, 723-734.
- 2013 (68) *Kanner, L.C., S. Burns, H. Cheng, L.R. Edwards and **M. Vuille**, 2013: High-resolution variability of the South American summer monsoon over the last seven millennia: Insights from a speleothem record from the central Peruvian Andes. *Quat. Sci., Rev.*, 75, 1-10.
- 2013 (67) *Konecky, B.L., J.M. Russell, J.R. Rodysill, **M. Vuille**, S. Bijaksana and Y. Huang, 2013: Intensification of southwestern Indonesian rainfall over the past millenium. *Geophys. Res. Lett.*, 40(2), 386-391, doi:10.1029/2012GL054331.
- 2013 (66) Rodysill, J.R., J.M. Russell, S.D. Crausbay, S. Bijaksana, **M. Vuille**, R.L. Edwards and H. Cheng, 2013: A severe drought during the last millennium in East Java, Indonesia. *Quat. Sci. Rev.*, 80, 102-111.

- 2013 (65) Polissar, P.J., M.B. Abbott, A.P. Wolfe, **M. Vuille** and M. Bezada, 2013: Synchronous interhemispheric Holocene climate trends in the tropical Andes. *Proc. Nat. Acad. Sci.*, 110(36), 14551-14556.
- 2013 (64) Ledru, M.-P., V. Jomelli, P. Samaniego, **M. Vuille**, S. Hidalgo, M. Herrera and C. Ceron, 2013: The Medieval Climate Anomaly and the Little Ice Age in the eastern Ecuadorian Andes. *Clim. Past*, 9, 307-321.
- 2013 (63) Cheng, H., A. Sinha, F.W. Cruz, X. Wang, R.L. Edwards, F.M. d'Horta, C.C. Ribas, **M. Vuille**, L.D. Stott and A.S. Auler, 2013: Climate change patterns in Amazonia and biodiversity. *Nature Comm.*, 4, 1411.
- 2013 (62) Rabatel, A., B. Francou, A. Soruco, J. Gomez, B. Cáceres, J. L. Ceballos, R. Basantes, **M. Vuille**, J.-E. Sicart, C. Huggel, M. Scheel, Y. Lejeune, Y. Arnaud, M. Collet, T. Condom, G. Consoli, V. Favier, V. Jomelli, R. Galarraga, P. Ginot, L. Maisincho, J. Mendoza, M. Ménégoz, E. Ramirez, P. Ribstein, W. Suarez, M. Villacis and P. Wagnon, 2013: Current state of glaciers in the tropical Andes. A multi-century perspective on glacier evolution and climate change. *Cryosphere*, 7, 81-102.
- 2012 (61) **Vuille, M.**, S.J. Burns, B.L. Taylor, F.W. Cruz, *B.W. Bird, M.B. Abbott, *L.C. Kanner, H. Cheng and V.F. Novello, 2012: A review of the South American monsoon history as recorded in stable isotopic proxies over the past two millennia. *Clim. Past*, 8, 1309-1321.
- 2012 (60) **Vuille, M.** and R.D. Garreaud, 2012: Ocean-atmosphere interactions on interannual to decadal timescales. In Matthews, J.A., P.J. Bartlein, K.R. Briffa, A.G. Dawson, A. De Vernal, T. Denham, S.C. Fritz and F. Oldfield (Eds.), *Handbook of Environmental Change*. Sage Publications, London, Los Angeles, New Delhi, Singapore, p.471-496.
- 2012 (59) Novello, V.F., F.W. Cruz, I. Karmann, S.J. Burns, N.M., Stríkis, **M. Vuille**, H. Cheng, R.L. Edwards, R.V. Santos, E. Frigo and E.A.S. Barreto, 2012: Multidecadal climate variability in Brazil's Nordeste during the last 3000 years based on speleothem isotope records, *Geophys. Res. Lett.*, 39, L23706, doi:10.1029/2012GL053936.
- 2012 (58) *McGlone, D., and **M. Vuille**, 2012: The associations between El Niño - Southern Oscillation and tropical South American climate in a regional climate model. *J. Geophys. Res.*, 117, D06105, doi:10.1029/2011JD017066.
- 2011 (57) **Vuille, M.**, 2011: Climate variability and high altitude temperature and precipitation. In Haritashya, U.K., P. Singh and V.P. Singh (Eds.), *Encyclopedia of snow, ice and glaciers*. Springer - Encyclopedia of Earth Science Series, p. 153-156.
- 2011 (56) **Vuille, M.**, 2011: Andean glaciers. In Haritashya, U.K., P. Singh and V.P. Singh (Eds.), *Encyclopedia of snow, ice and glaciers*. Springer - Encyclopedia of Earth Science Series, p. 40-43.
- 2011 (55) *Bird, B.W., M.B. Abbott, **M. Vuille**, D.T. Rodbell, N.D. Stansell and M.F. Rosenmeier, 2011: A 2,300-year-long annually resolved record of the South American summer monsoon from the Peruvian Andes. *Proc. Nat. Acad. Sci.*, 108(21), 8583-8588.
- 2011 (54) *Bird, B.W., M.B. Abbott, D.T. Rodbell and **M. Vuille**, 2011: Holocene tropical South American hydroclimate revealed from a decadal resolved lake sediment $\delta^{18}\text{O}$ record. *Earth Planet. Sci. Lett.*, 310, 192-202.

- 2011 (53) Strikis, N.M., F.W. Cruz Jr., H. Cheng, I. Karmann, R.L. Edwards, **M. Vuille**, X. Wang, M.S. de Paula, V.F., Novello and A.S. Auler, 2011: Abrupt variations in South American monsoon rainfall during the Holocene based on a speleothem record from central-eastern Brazil. *Geology*, 39 (11), 1075-1078.
- 2011 (52) Jomelli, V., M. Khodri, V. Favier, D. Brunstein, M-P. Ledru, P. Wagnon, P-H. Blard, J-E. Sicart, R. Braucher, D. Grancher, D. Bourlès, P. Braconnot and **M. Vuille**, 2011: Irregular tropical glacier retreat over the Holocene driven by progressive warming. *Nature*, 474, 196-199.
- 2011 (51) Viviroli, D., D.R. Archer, W. Buytaert, H.J. Fowler, G.B. Greenwood, A.F. Hamlet, Y. Huang, G. Koboltschnig, M.I. Litaor, J.I. Lopez-Moreno, S. Lorentz, B. Schaedler, H. Schreier, K. Schwaiger, **M. Vuille** and R. Woods, 2011: Climate Change and mountain water resources: overview and recommendations for research management and policy. *Hydrol. Earth Syst. Sci.*, 15, 471-504.
- 2010 (50) Medina-Elizalde, M., S.J. Burns, D.W. Lea, Y. Asmerome, L. von Gunten, V. Polyak, **M. Vuille** and A. *Karmalkar, 2010: High resolution stalagmite climate record from the Yucatan Peninsula spanning the Maya terminal classic period. *Earth Planet. Sci. Lett.*, 298, 255-262.
- 2010 (49) Buytaert, W., **M. Vuille**, A. DeWulf, *R. Urrutia, *A. Karmalkar and R. Celleri, 2010: Uncertainties in climate change projections and regional downscaling in the tropical Andes: implications for water resources management. *Hydrol. Earth Syst. Sci.*, 14, 1247-1258.
- 2010 (48) Eggermont, H., O. Heiri, J. Russell, **M. Vuille**, L. Audenaert and D. Verschuren, 2010: Paleotemperature reconstruction in tropical Africa using fossil Chironomidae (Insecta: Diptera). *J. Paleolimnol.*, 43(3), 413-435, doi:10.1007/s10933-009-9339-2.
- 2009 (47) *Urrutia, R. and **M. Vuille**, 2009: Climate Change projections for the tropical Andes using a regional climate model: Temperature and precipitation simulations for the end of the 21st century. *J. Geophys. Res.*, 114, D02108, doi:10.1029/2008JD011021.
- 2009 (46) Verschuren, D., J.S. Sinninghe Damsté, J. Moernaut, I. Kristen, M. Blaauw, M. Fagot, G.H. Haug and CHALLACEA project members (B. van Geel, M. De Batist, P. Barker, **M. Vuille**, D. Conley, D.O. Olago, I. Milne, B. Plessen, H. Eggermont, C. Wolff, E. Hurrell, J. Ossebaar, A. Lyaruu, J. van der Plicht, B.F. Cumming, A. Brauer, S.M. Rucina, J.M. Russell, E. Keppens, J. Hus, R.S. Bradley, M. Leng, J. Mingram and N.R. Nowaczyk), 2009: Half-precessional dynamics of monsoon rainfall near the East African equator. *Nature*, 462, 637-641.
- 2009 (45) Cruz Jr., F.W., **M. Vuille**, S.J. Burns, X. Wang, H. Cheng, M. Werner, R.L. Edwards, I. Karmann, A.S. Auler and H. Nguyen, 2009: Orbitally driven east-west anti-phasing of South American precipitation. *Nature Geosci.*, 2(3), 210-214, doi:10.1038/NGEO444.
- 2009 (44) Garreaud, R.D., **M. Vuille**, R.H. Compagnucci and J. Marengo, 2009: Present-day South American climate. *Palaeogeogr. Palaeoclimatol. Palaeoecol.*, 281, 180-195. doi:10.1016/j.palaeo.2007.10.032.

- 2009 (43) Vimeux, F., P. Ginot, M. Schwikowski, **M. Vuille**, G. Hoffmann, L.G. Thompson and U. Schotterer, 2009: Climate variability during the last 1000 years inferred from Andean ice cores: a review of recent results. *Palaeogeogr. Palaeoclimatol. Palaeoecol.*, 281, 229-241. doi:10.1016/j.palaeo.2008.03.054.
- 2009 (42) Cruz Jr., F.W., X. Wang, A. Auler, **M. Vuille**, S.J. Burns, L.R. Edwards, I. Karmann and H. Cheng, 2009: Orbital and millennial-scale precipitation changes in Brazil from speleothem records. In: Vimeux, F., F. Sylvestre and M. Khodri (Eds.): *Past climate variability in South America and surrounding regions*. Developments in Paleoenvironmental Research Series, Vol. 14, Springer Publishing, p.29-60.
- 2008 (41) **Vuille, M.**, B. Francou, P. Wagnon, I. Juen, G. Kaser, B.G. Mark and R.S. Bradley, 2008: Climate change and tropical Andean glaciers – Past, present and future. *Earth Sci. Rev.*, 89, 79-96. doi: 10.1016/j.earscirev.2008.04.002.
- 2008 (40) **Vuille, M.**, G. Kaser and I. Juen, 2008: Glacier mass balance variability in the Cordillera Blanca, Peru and its relationship with climate and the large-scale circulation. *Global Planet. Change*, 62(1-2), 14-28. doi:10.1016/j.gloplacha.2007.11.003.
- 2008 (39) *Chan, R.Y., **M. Vuille**, D.R. Hardy and R.S. Bradley, 2008: Intraseasonal precipitation variability on Kilimanjaro and the East African region and its relationship to the large-scale circulation. *Theor. Appl. Climatol.*, 93, 149-165. doi:10.1007/s00704-007-0338-9.
- 2007 (38) **Vuille, M.** and J.P. Milana, 2007: High-latitude forcing of regional aridification along the subtropical west coast of South America. *Geophys. Res. Lett.*, 34, L23703, doi:10.1029/2007GL031899.
- 2007 (37) Cruz Jr., F.W., S.J. Burns, M. Jercinovic, I. Karmann, W.D. Sharp and **M. Vuille**, 2007: Evidence of rainfall variations in southern Brazil from trace element ratios (Mg/Ca and Sr/Ca) in a Late Pleistocene stalagmite. *Geochim. Cosmochim. Ac.*, 71(9), 2250-2263.
- 2007 (36) Fleitmann, D., R.B. Dunbar, M. McCulloch, M. Mudelsee, **M. Vuille**, T. McClanahan, J.E. Cole and S. Eggins, 2007: East African soil erosion recorded in a 300 year old coral colony from Kenya. *Geophys. Res. Lett.*, 34, L04401, doi:10.1029/2006GL028525.
- 2006 (35) Bradley, R.S., **M. Vuille**, H.F. Diaz and W. Vergara, 2006: Threats to water supplies in the Tropical Andes. *Science*, 312, 5781, 1755-1756.
- 2006 (34) Cruz Jr., F.W., S.J. Burns, I. Karmann, W.D. Sharp, **M. Vuille** and J.A. Ferrari, 2006: A stalagmite record of changes in atmospheric circulation and soil processes in the Brazilian subtropics during the Late Pleistocene. *Quat. Sci. Rev.*, 25, 2749-2761.
- 2006 (33) Mölg, T., M. Renold, **M. Vuille**, N.J. Cullen, T.F. Stocker and G. Kaser, 2006: Indian Ocean Zonal Mode activity in a multicentury-integration of a coupled AOGCM consistent with climate proxy data. *Geophys. Res. Lett.*, 33, L18710, doi:10.1029/2006GL026384.
- 2006 (32) Cruz Jr., F.W., S.J. Burns, I. Karmann, W.D. Sharp and **M. Vuille**, 2006: Reconstruction of regional atmospheric circulation features during the Late Pleistocene in subtropical Brazil from oxygen isotope composition of speleothems. *Earth Planet. Sci. Lett.*, 248, 494-506.

- 2006 (31) Cáceres, B., B. Francou, V. Favier, G. Bontron, P. Tachker, R. Bucher, J.D. Taupin, **M. Vuille**, L. Maisincho, F. Delachaux, J.P. Chazarin, E. Cadier and M. Villacis, 2006: Glacier 15, Antisana, Ecuador: its glaciology and relations to water resources. In: Demuth, S., A. Gustard, E. Planos, F. Scatena and E. Servat (Eds.): *Climate Variability and Change—Hydrological Impacts*. IAHS Publ. 308, p.479–482.
- 2005 (30) **Vuille, M.** and M. Werner, 2005: Stable isotopes in precipitation recording South American summer monsoon and ENSO variability - observations and model results. *Clim. Dynam.*, 25, 401-413, doi:10.1007/s00382-005-0049-9.
- 2005 (29) **Vuille, M.**, M. Werner, R.S. Bradley and F. Keimig, 2005: Stable isotopes in precipitation in the Asian monsoon region. *J. Geophys. Res.*, 110, D23108, doi:10.1029/2005JD006022.
- 2005 (28) **Vuille, M.**, M. Werner, R.S. Bradley, *R.S. Chan and F. Keimig, 2005: Stable isotopes in East African precipitation record Indian Ocean Zonal mode. *Geophys. Res. Lett.*, 32 (21), L21705, doi:10.1029/2005GL023876.
- 2005 (27) Latorre, C.L., J.L. Betancourt, J.A. Rech, J. Quade, C. Holmgren, C.P. Placzek, A. Maldonado, **M. Vuille** and K.A. Rylander, 2005: Late Quaternary history of the Atacama desert. In: Smith, M. and P. Hesse (Eds.): *23°S: Archaeology and environmental history of the southern deserts*, p. 73-90. National Museum of Australia Press, Canberra, Australia.
- 2005 (26) Cruz Jr., F.W., I Karmann, O. Viana Jr., S.J. Burns, J.A. Ferrari, **M. Vuille**, A.N. Sial and M.Z. Moreira, 2005: Stable isotope study of cave percolation waters in subtropical Brazil: implications for paleoclimate inferences from speleothems. *Chem. Geology*, 220, 245-262.
- 2005 (25) Cruz Jr., F.W., S.J. Burns, I. Karmann, W.D. Sharp, **M. Vuille**, A.O. Cardoso, J.A. Ferrari, P.L. Silva Dias and O. Viana Jr., 2005: Insolation-driven changes in atmospheric circulation over the past 116,000 years in subtropical Brazil. *Nature*, 434, 63-66.
- 2004 (24) Francou, B., **M. Vuille**, V. Favier and B. Cáceres, 2004: New evidence for an ENSO impact on low latitude glaciers: Antisana 15, Andes of Ecuador, 0°28'S. *J. Geophys. Res.*, 109, D18106, doi:10.1029/2003JD004484.
- 2004 (23) **Vuille, M.** and F. Keimig, 2004: Interannual variability of summertime convective cloudiness and precipitation in the central Andes derived from ISCCP-B3 data. *J. Climate*, 17, 3334-3348.
- 2003 (22) **Vuille, M.**, R.S. Bradley, M. Werner and F. Keimig, 2003: 20th century climate change in the tropical Andes – observations and model results. *Climatic Change*, 59(1-2), 75-99. Reprinted in: Diaz, H.F. (Ed.): *Climate variability and change in high elevation regions: Past, present and future*. Advances in Global Change Research, 15. Kluwer Academic Publishers, Dordrecht.
- 2003 (21) **Vuille, M.**, R.S. Bradley, M. Werner, R. Healy and F. Keimig, 2003: Modeling $\delta^{18}\text{O}$ in precipitation over the tropical Americas: 1. Interannual variability and climatic controls, *J. Geophys. Res.*, 108, D6, 4174, doi:10.1029/2001JD002038.

- 2003 (20) **Vuille, M.**, R.S. Bradley, R. Healy, M. Werner, D.R. Hardy, L.G. Thompson and F. Keimig, 2003: Modeling $\delta^{18}\text{O}$ in precipitation over the tropical Americas: 2. Simulation of the stable isotope signal in Andean ice cores, *J. Geophys. Res.*, 108, D6, 4175, doi:10.1029/2001JD002039.
- 2003 (19) Abbott, M., B. Wolfe, A. Wolfe, G. Seltzer, R. Aravena, B. Mark, P. Polissar, D. Rodbell, H.A. Rowe and **M. Vuille**, 2003: Holocene paleohydrology and glacial history of the central Andes from multiproxy lake sediment studies. *Palaeogeogr. Palaeoclimatol. Palaeoecol.* 194, 122-138.
- 2003 (18) Bradley, R.S., **M. Vuille**, D.R. Hardy and L.G. Thompson, 2003: Low latitude ice cores record Pacific sea surface temperatures. *Geophys. Res. Lett.*, 30(4), 1174, doi: 10.1029/2002GL016546.
- 2003 (17) Francou, B., **M. Vuille**, P. Wagnon, J. Mendoza and J.E. Sicart, 2003: Tropical climate change recorded by a glacier in the central Andes during the last decades of the twentieth century: Chacaltaya, Bolivia, 16°S. *J. Geophys. Res.*, 108, D5, 4154, doi: 10.1029/2002JD002959.
- 2003 (16) Garreaud, R., **M. Vuille** and A.C. Clement, 2003: The climate of the Altiplano: Observed current conditions and mechanisms of past changes. *Palaeogeogr. Palaeoclimatol. Palaeoecol.*, 194, 5-22.
- 2003 (15) Hardy, D.R., **M. Vuille** and R.S. Bradley, 2003: Variability of snow accumulation and isotopic composition on Nevado Sajama, Bolivia. *J. Geophys. Res.*, 108, D22, 4693, doi: 10.1029/2003JD003623.
- 2003 (14) Marwan, N., M.H. Trauth, **M. Vuille** and J. Kurths, 2003: Comparing modern and Pleistocene ENSO influences in NW Argentina using nonlinear time series analysis methods. *Clim. Dynam.*, 21 (3-4), 317-326, doi: 10.1007/s00382-003-0335-3.
- 2001 (13) Arnaud, Y., F. Muller, **M. Vuille** and P. Ribstein, 2001: El Niño - Southern Oscillation (ENSO) influence on a Sajama volcano glacier from 1963 to 1998 as seen from Landsat data and aerial photography. *J. Geophys. Res.*, 106, 17773-17784.
- 2000 (12) **Vuille, M.** and R.S. Bradley, 2000: Mean annual temperature trends and their vertical structure in the tropical Andes. *Geophys. Res. Lett.*, 27, 3885-3888.
- 2000 (11) **Vuille, M.**, R.S. Bradley and F. Keimig, 2000: Climatic variability in the Andes of Ecuador and its relation to tropical Pacific and Atlantic sea surface temperature anomalies. *J. Climate*, 13, 2520-2535.
- 2000 (10) **Vuille, M.**, R.S. Bradley and F. Keimig, 2000: Interannual climate variability in the central Andes and its relation to tropical Pacific and Atlantic forcing. *J. Geophys. Res.*, 105, 12447-12460.
- 1999 (9) **Vuille, M.**, 1999: Atmospheric circulation over the Bolivian Altiplano during dry and wet periods and extreme phases of the Southern Oscillation. *Int. J. Climatol.*, 19, 1579-1600.
- 1998 (8) **Vuille, M.**, D.R. Hardy, C. Braun, F. Keimig and R.S. Bradley, 1998: Atmospheric circulation anomalies associated with 1996/97 summer precipitation events on Sajama ice cap, Bolivia. *J. Geophys. Res.*, 103, 11191-11204.
- 1998 (7) **Vuille, M.** and M.F. Baumgartner, 1998: Monitoring the regional and temporal variability of winter snowfall in the arid Andes using digital NOAA/AVHRR data. *Geocarto Int.*, 13, 59-67.

- 1998 (6) Hardy, D.R., **M. Vuille**, C. Braun, F. Keimig and R.S. Bradley, 1998: Annual and daily meteorological cycles at high altitude on a tropical mountain. *Bull. Amer. Meteor. Soc.*, 79(9), 1899-1913.
- 1997 (5) **Vuille, M.** and C. Ammann, 1997: Regional snowfall patterns in the high arid Andes. *Climatic Change*, 36, 413-423. Reprinted in: Diaz, H.F., Beniston, M., Bradley, R.S. (Eds.): *Climatic Change at high elevation sites*. Kluwer Academic Publishers, Dordrecht, 181-191.
- 1997 (4) Messerli, B., M. Grosjean and **M. Vuille**, 1997: Protected areas and natural resources in the desert Andean Altiplano. *Mountain Res. Devel.*, 17(3), 229-238.
- 1993 (3) **Vuille, M.** and M.F. Baumgartner, 1993: Hydrologic investigations in the north Chilean Altiplano using Landsat-MSS and -TM data. *Geocarto Int.*, 8(3), 35-45.
- 1993 (2) Messerli, B., M. Grosjean, G. Bonani, A. Bürgi, M.A. Geyh, K. Graf, K. Ramseyer, H. Romero, U. Schotterer, H. Schreier and **M. Vuille**, 1993: Climate Change and natural resource dynamics of the Atacama Altiplano during the last 18'000 years: a preliminary synthesis. *Mountain Res. Devel.*, 13(2), 117-127.
- 1993 (1) Messerli, B., M. Grosjean, K. Graf, U. Schotterer, H. Schreier and **M. Vuille**, 1992: Die Veränderungen von Klima und Umwelt in der Region Atacama (Nordchile) seit der letzten Kaltzeit. *Erdkunde*, 46, 257-272, (in German).

NON-REFEREED PUBLICATIONS, REPORTS & PODCASTS

- 2026 Glacial collapse and climate change. *Campus Insights*.
<https://www.youtube.com/watch?v=aEkmaxt0GWI&t=48s>
- 2026 Glacial collapse and climate change. *The Scholars' Circle Podcast*.
https://www.scholarscircle.org/wp-content/uploads/interviews/scholarscircleinsighters_20260906.mp3
- 2025 **Vuille, M.**, 2025: Foreword. ANDEX Lecturas Compendium (*in Spanish*).
- 2025 Exploring Climate Change in South America. *The Academic Minute*.
<https://academicminute.substack.com/p/mathias-vuille-university-at-albany-5f6>
- 2025 Davies, B.J., Becker, R., Bhattacharjee, S., Bradley, S., King, O., Potter, E., Lee, E., Andrade, M., Ávila, F., Baiker, J.R., Bendle, J., Borrell, L., Bozkurt, D., Bravo, C., Buytaert, W., Calle, J., Carrivick, J.L., Cuadros-Adriazola, J., Curry, C.S., Drenkhan, F., Dussaillant, A., Dussaillant, I., Edwards, T., Falaschi, D., Fox, E., García, J-L., Gribbin, T., Gonzalez, M., Huss, M., Innes-Jones, L., Irarrazaval, I., Jones, J., Li, S., Masiokas, M., Matthews, T., Maussion, F., McNabb, R., Montoya, N., Nicholson, L., Paschalis, A., Pellitero, R., Perry, B., Pitte, P., Rabatel, A., Reid, B., Somos-Valenzuela, M., Soruco, A., Ticona, L., Velarde, F., **Vuille, M.**, Ely, J., 2025: Policy brief: the future of the Andean water towers. *Newcastle University, Newcastle, UK*. 20 pp.
https://www.antarcticglaciers.org/wp-content/uploads/2025/03/Policybrief_V3_continuous_booklet.pdf
- 2024 Weighing In: Cracks in the ice? *Weighing in Podcast*.
<https://weighingin.castos.com/episodes/weighing-in-cracks-in-the-ice>

- 2023 The PIRE-CREATE Project. *AGU-TV*.
<https://www.youtube.com/watch?v=5WIJnnKPvEQ>
- 2023 Can the ski industry survive climate change? – *The climate question BBC Sounds*, 2023. <https://www.bbc.co.uk/sounds/play/w3ct3kbb>
- 2018 Climate Change Pt. 2: A Case Study of Peru's Quelccaya Ice Cap. UAlbany podcast. <https://ualbanynewspodcast.simplecast.com/episodes/climate-change-pt-2-with-mathias-vuille-41602ee9>
- 2018 **Vuille M**, 2018: We've been studying a glacier in Peru for 14 years – and it may reach the point of no return in the next 30. *The Conversation*.
<https://theconversation.com/weve-been-studying-a-glacier-in-peru-for-14-years-and-it-may-reach-the-point-of-no-return-in-the-next-30-106422>
- 2018 **Vuille, M.**, 2018: Climate change: A grand challenge that requires global understanding. *Global Synergies*, Vol. 7, p.3.
- 2018 Schoolmeester, T., et al., 2018: The Andean glacier and water Atlas – The impact of glacier retreat on water resources. 2018. *UNESCO and GRID-Arendal*, 80p.
<https://unesdoc.unesco.org/ark:/48223/pf0000265810>
- 2018 Rivera, A., F. Bown, F. Napoleoni, C. Muñoz and **M. Vuille**, 2017: Balance de masa glaciar con el método glaciológico. *US Department of State / UNESCO / ACCION / CECS Technical document*, Valdivia, Chile, 248pp., (in Spanish).
<http://www.glaciologia.cl/libro.pdf>
- 2017 Carey, M., R. Garrard, C. Cecale, W. Buytaert, C. Huggel and **M. Vuille**, 2017: Climbing for Science and Ice: From Hans Kinzl and Mountaineering-Glaciology to Citizen Science in the Cordillera Blanca. *Revista del INAIGEM*, 1, 59-72.
- 2015 **Vuille, M.**, 2015: Challenges in sustainable water supply in the tropical Andes due to climate change. *UNESCO Division of Water Sciences, Policy Brief, SC-2015/WS/11*, 8pp. <https://unesdoc.unesco.org/ark:/48223/pf0000234877>
- 2013 **Vuille, M.**, 2013: Climate change and water resources in the tropical Andes. *Interamerican Development Bank, Environmental Safeguards Unit. Technical Note No. IDB-TN-515*, 35pp. (also available in Spanish).
<https://publications.iadb.org/en/climate-change-and-water-resources-tropical-andes>
- 2013 Francou, B., A. Rabatel, A. Soruco, J.E. Sicart, E. Silvestre, P. Ginot, B. Cáceres, T. Condom, M. Villacís, J.L. Ceballos, B. Lehmann, F. Anthelme, O. Dangles, J. Gomez, V. Favier, L. Maisincho, V. Jomelli, **M. Vuille**, P. Wagnon, Y. Lejeune, C. Ramallo, and J. Mendoza, 2013: Glaciares de los Andes tropicales - victimas del cambio climatico, *CAN-PRAA-IRD*, 99pp. (in Spanish).
- 2012 **Vuille, M.**, 2012: Climate change and water resources in the tropical Andes. *Interamerican Development Bank 2012 Sustainability Report*, p. 18-20.
<https://publications.iadb.org/en/inter-american-development-bank-sustainability-report-2012>
- 2006 **Vuille, M.**, 2006: Climate Change in the tropical Andes – Observations, models, and simulated future impacts on glaciers and streamflow. *Mountain Res. Devel.*, 26, 3.
- 2001 Folland, C.K., T.R. Karl, J.R. Christy, R.A. Clarke, G.V. Gruza, J. Jouzel, M.E. Mann, J. Oerlemans, M.J. Salinger, S-W. Wang, J. Bates, M. Crowe, P. Frich, P. Groisman, J. Hurrell, P. Jones, D. Parker, T. Peterson, D. Robinson, J. Walsh, M. Abbott, L. Alexander, H. Alexandersson, R. Allan, R. Alley, P. Ambenje, P. Arkin,

- L. Bajuk, R. Balling, M.Y. Bardin, R. Bradley, R. Brázdil, K.R. Briffa, H. Brooks, R.D. Brown, S. Brown, M. Brunet-India, M. Cane, D. Changnon, S. Changnon, J. Cole, D. Collins, E. Cook, A. Dai, A. Douglas, B. Douglas, J.C. Duplessy, D. Easterling, P. Englehart, R.E. Eskridge, D. Etheridge, D. Fisher, D. Gaffen, K. Gallo, E. Genikhovich, D. Gong, G. Gutman, W. Haeberli, J. Haigh, J. Hansen, D. Hardy, S. Harrison, R. Heino, K. Hennessy, W. Hogg, S. Huang, K. Huguen, M.K. Hughes, M. Hulme, H. Iskenderian, O.M. Johannessen, D. Kaiser, D. Karoly, D. Kley, R. Knight, K.R. Kumar, K. Kunkel, M. Lal, C. Landsea, J. Lawrimore, J. Lean, C. Leovy, H. Lins, R. Livezey, K.M. Lugina, I. Macadam, J.A. Majorowicz, B. Manighetti, J. Marengo, E. Mekis, M.W. Miles, A. Moberg, I. Mokhov, V. Morgan, L. Mysak, M. New, J. Norris, L. Ogallo, J. Overpeck, T. Owen, D. Paillard, T. Palmer, C. Parkinson, C.R. Pfister, N. Plummer, H. Pollack, C. Prentice, R. Quayle, E.Y. Rankova, N. Rayner, V.N. Razuvaev, G. Ren, J. Renwick, R. Reynolds, D. Rind, A. Robock, R. Rosen, S. Rösner, R. Ross, D. Rothrock, J.M. Russell, M. Serreze, W.R. Skinner, J. Slack, D.M. Smith, D. Stahle, M. Stendel, A. Sterin, T. Stocker, B. Sun, V. Swail, V. Thapliyal, L. Thompson, W.J. Thompson, A. Timmermann, R. Toumi, K. Trenberth, H. Tuomenvirta, T. van Ommen, D. Vaughan, K.Y. Vinnikov, U. von Grafenstein, H. von Storch, **M. Vuille**, P. Wadhams, J.M. Wallace, S. Warren, W. White, P. Xie, P. Zhai, 2001: Observed Climate Variability and Change. In: *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]*. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 881pp.
- 2001 **Vuille, M.**, D.R. Hardy, C. Braun, F. Keimig and R.S. Bradley, 2001: Climate variability on intraseasonal to interannual timescales on the Bolivian Altiplano with special emphasis on the Nevado Sajama region. *Ecologia en Bolivia*, 35, 17-40.
- 1998 **Vuille, M.**, D.R. Hardy and R.S. Bradley, 1998: The impact of El Niño / La Niña in the region of Nevado Sajama, Bolivia. In: *Servicio Nacional de Meteorología e Hidrología de Bolivia (SENAMHI): El Fenómeno de El Niño en Bolivia - evaluacion, balance y perspectivas*, 229-247, La Paz, Bolivia.
- 1998 Messerli, B., C. Ammann, M. Grosjean, B. Jenny, K. Kammer and **M. Vuille**, 1998: Current precipitation, the late Pleistocene snow line, and lake level changes in the Atacama Altiplano (18°S-28°30'S): the problem of the Andean dry diagonal. *Bamberger Geographische Schriften*, 15, 17-34.
- 1997 Messerli, B., M. Grosjean and **M. Vuille**, 1997: Protected areas and natural resources in the desert Andean Altiplano. In: Liberman, M., Baied, C., (Eds.): *Desarrollo sostenible de Ecosistemas de Montaña: Manejo de areas fragiles en los Andes*, UNU-PL-480, 15-24.
- 1996 **Vuille, M.**, 1996: Zur raumzeitlichen Dynamik von Schneefall und Ausaperung im Bereich des südlichen Altiplano, Südamerika. *Geographica Bernensia*, G 45, Bern, 118 pp., (in German).
- 1996 Grosjean, M., C. Ammann, W. Egli, M.A. Geyh, B. Jenny, K. Kammer, C. Kull, U. Schotterer and **M. Vuille**, 1996: Klimaforschung am Llullaillaco (Nordchile) - zwischen Pollenkörnern und globaler Zirkulation. *Jahrbuch der Geographischen Gesellschaft Bern*, 59, 111-121, (in German).

- 1996 Grosjean, M., G. Bonani, A. Bürgi, M.A. Geyh, K. Graf, B. Messerli, K. Ramseyer, H. Romero, U. Schotterer, H. Schreier and **M. Vuille**, 1996: Climatic change and dynamics of natural resources in Northern Chile during the Late Glacial and the early Holocene - Preliminary synthesis. In: Romero, H., (Ed.): *I. Taller Internacional de Geoecología de montaña y desarrollo sustentable de los Andes del Sur, University of Chile and United Nations University*, 69-78.
- 1995 Grosjean, M., B. Messerli, C. Ammann, M.A. Geyh, K. Graf, B. Jenny, K. Kammer, L. Nuñez, H. Schreier, U. Schotterer, A. Schwalb, B. Valero-Garcés and **M. Vuille**, 1995: Holocene environmental changes in the Atacama Altiplano and paleoclimatic implications. *Bull. Inst. fr. études andines*, 24(3), 585-594.

SCIENTIFIC PRESENTATIONS

(Only 1st-authored and invited are listed; >400 contributed and co-authored presentations)

International

- 2026 Panelist, World Glacier Day, UN Headquarters, New York City, USA, March 2026.
- 2025 ANDEX Annual meeting, IANIGLA, Mendoza, Argentina, Oct. 2025.
- 2025 Bolivian Climate Change project Meeting, Univ. Bern, Switzerland, July 2025.
- 2025 Keynote, Glacier Symposium Pontifical Catholic Univ., Lima, Peru, July 2025.
- 2025 Panelist, Andean Climate Change Workshop, Pontifical Catholic Univ., Lima, Peru, July 2025.
- 2025 Paramo Symposium, Jorge Tadeo Lozano Univ., Bogota, Colombia, June 2025.
- 2025 Society for American Archaeology, Annual Meeting, Denver, April 2025 (*virtual*).
- 2024 AccelNet-ACCORD 1st Annual Meeting, Washington, D.C., Dec. 2024.
- 2024 Deplete and Retreat (DaR) project Meeting, London, UK, Oct. 2024 (*virtual*).
- 2024 PIRE-CREATE Project meeting, Ubatuba, Brazil. Aug. 2024
- 2024 WCRP-CliC Panel on mountain cryosphere impacts, Vienna, Austria, April 2024
- 2023 S4 Summer School, University of Sao Paulo, Brazil, Aug. 2023
- 2023 Tropospheric lapse rate workshop, Univ. Sorbonne, Paris, France, July 2023
- 2022 Global Monsoon Webinar Series, Nov. 2022 (*virtual*)
- 2022 Panelist, UN General Assembly High-Level Panel on Glacier retreat, New York City, Oct. 2022
- 2022 National Institute for Space Research (INPE), São José dos Campos, Brazil, Seminar, Aug. 2022
- 2022 Department of Forest Sciences, University of Sao Paulo, Piracicaba, Brazil, Seminar, Aug. 2022
- 2022 Panelist, 2nd World High Mountain Summit, USAID, Pereira, Colombia June 2022 (*virtual*)
- 2022 University of Tuebingen, Germany, Seminar, April 2022 (*virtual*)

- 2021 XXIX Meeting Argentinean Assoc. Geophysicists. & Geodesists, Aug. 2021
(*virtual*)
- 2021 Iberoamer. Meteorol. Winter School, Univ. La Molina, Lima, Peru, June 2021
(*virtual*)
- 2020 Virtual High Mountain Summit, IDEAM – Bogota, Colombia, Dec. 2020, (*virtual*)
- 2020 Natl. Inst. for Glacier & Mountain Ecosystem Res., Huaraz, Peru, April 2020
(*virtual*)
- 2019 Lecturer, PIRE-CREATE Summer School, Univ. Sao Paulo, Brazil, July 2019
- 2019 PIRE-CREATE Annual Meeting, Univ. Sao Paulo, Brazil, July 2019
- 2019 Panelist, UNESCO Glacier Meeting, Ministry of Foreign Affairs, Santiago, Chile,
Jan. 2019
- 2018 Mountain Research Initiative Scientific Leadership Council, Aeschi, Switzerland,
Nov. 2018
- 2018 Plenary Speaker, International Biogeographical Society meeting, Évora, Portugal,
March 2018
- 2017 Keynote, SGP International Congress on climate change, Huaraz, Peru, Nov. 2017
- 2017 Keynote, Int. Conference on Integrated Water Management, Cuenca, Ecuador, Oct.
2017
- 2017 UNESCO workshop - Impact of glacier retreat in the Andes, Mendoza, Argentina,
Aug. 2017
- 2017 University of Grenoble, France, Seminar, July 2017
- 2017 University of Grenoble, France, Seminar, June 2017
- 2016 Mountain Research Initiative Scientific Leadership Council meeting, Porto,
Portugal, Oct. 2016
- 2016 Mountain Research Initiative (MRI) meeting, Lisbon, Portugal, June 2016
- 2016 UNESCO workshop - Impact of glacier retreat in the Andes, Santiago, Chile, Sept.
2015
- 2015 US-BIOTA Meeting, Dimensions of Atlantic Forest Biodiversity, Sao Paulo, Brazil,
June 2015
- 2014 UNESCO Climate change & water resources workshop, Koblenz, Germany, Nov.
2014
- 2014 U CLIMATICA conference, Peruvian Ministry of Environment & US Embassy,
Lima, Oct. 2014
- 2014 Dept. of Geography, University of Zurich, Switzerland, Seminar, Oct. 2014
- 2014 LOTRED-SA Symposium on South American paleoclimate, Medellin, Colombia,
July 2014
- 2013 ACCION/UNESCO/CONDESAN Policy & adaptation workshop, Quito, Ecuador,
Nov. 2013
- 2013 Panelist, Mountain workshop, 37th UNESCO General Conference, Paris, France,
Nov. 2013

- 2013 Lecturer, Peruvian National Meteorological Service (SENAMHI), Lima, Peru, Sept. 2013
- 2013 Plenary address, Foro Glaciares, Huaraz, Peru, July 2013
- 2013 American Geophysical Union Meeting of the Americas, Cancun, Mexico, May 2013
- 2013 IAI-Meeting, Mendoza, Argentina, April 2013
- 2013 World Bank Project meeting, La Paz, Bolivia, March 2013
- 2012 Municipality of Guayaquil, Ecuador, Seminar, Nov. 2012
- 2012 Universidad Casa Grande, Guayaquil, Ecuador, Seminar, Nov. 2012
- 2012 Guayaquil Water Agency Interagua, Guayaquil, Seminar, Ecuador, Nov. 2012
- 2012 Universidad Ecotec, Guayaquil, Ecuador, Seminar, Nov. 2012
- 2012 Universidad San Francisco de Quito, Quito, Ecuador, Seminar, Nov. 2012
- 2012 Lecturer, ACCION glaciology workshop, Centro de Estudios Cientificos, Valdivia, Aug. 2012
- 2012 Institute of Geosciences, University of Sao Paulo, Brazil, Seminar, June 2012
- 2012 Panelist, U.S. Center at RIO+20, Rio de Janeiro, Brazil, June 2012
- 2012 UNESCO Forum on Sustainable Development at RIO+20, Rio de Janeiro, Brazil, June 2012
- 2012 Universidad Nacional San Marcos, Lima, Peru, Seminar, June 2012
- 2012 Peruvian Ministry of the Environment, Lima, Peru, Seminar, June 2012
- 2012 US Embassy, Lima, Peru, Interview for their website, June 2012
- 2012 Inter-American Institute for Cooperation on Agriculture (ICA), Huaura, Peru, Seminar, May 2012
- 2012 UNESCO Workshop on Climate Change Adaptation Strategies", Lima, Peru, May 2012
- 2012 IGBP - Mountain Research Initiative (MRI) meeting, Aeschi, Switzerland, April 2012
- 2012 ACCION project meeting, Santiago, Chile, Feb. 2012
- 2011 Universidad Nacional, Medellin, Colombia, Seminar, Nov. 2011
- 2011 IDEAM (Colombian Meteorological Service), Bogota, Colombia, Seminar, Nov. 2011
- 2011 Keynote, 7th Inter-American Dialogue on Water Management, Medellin, Colombia, Nov. 2011
- 2011 UNESCO meeting on Andean glacier retreat, Santiago, Chile, Sept. 2011
- 2011 International Continental Drilling Project (ICDP) meeting, Tarma, Peru, June 2011
- 2011 Keynote, Interamerican Development Bank, Water Division, Santiago, Chile, April 2011
- 2011 IAI Meeting, Tilcara, Argentina, April 2011

- 2010 Keynote, Symposium climate change and human health, Goethe Institute, Lima, Peru, Dec. 2010
- 2010 APECS (Antarctic Polar Early Career Scientists) Mentor Panel, Valdivia, Chile, Oct. 2010
- 2010 International Scientific Conference ECI 2010, Lima, Peru, Aug. 2010
- 2010 Lecturer, Peruvian Meteorological Service (SENAMHI), Lima, Peru, Aug. 2010
- 2010 International Glaciological Conference Ice and Climate Change, Valdivia, Chile, Feb. 2010
- 2009 IRD meeting on climate variability and change in the Andes, Lima, Peru, Sept. 2009
- 2009 Mountain Research Initiative workshop, Goeschenen, Switzerland, Sept. 2009
- 2008 Department of Geography, University of Bern, Switzerland, Seminar, May 2008
- 2006 Lotred-SA-PAGES meeting, Past Climate in South America, Malargue, Argentina, Oct. 2006
- 2006 CONCORD – Climate Change in the American Cordillera, Mendoza, Argentina, April 2006
- 2006 IAI Meeting, Mendoza, Argentina, April 2006
- 2005 Workshop on mountain climate change, Bogotá, Colombia, Nov. 2005
- 2005 NCCR Climate, University of Bern, Switzerland, Seminar, Aug. 2005
- 2003 Workshop on South American paleoclimate, Sao Paulo, Brazil, May 2003
- 2003 Dept. of Geophysics, University of Chile, Santiago, Chile, Seminar, March 2003
- 2001 Int. Workshop on Climate Change at High Elevation Sites, Davos, Switzerland, June 2001
- 1999 Dept. of Geography, University of Bern, Switzerland, Seminar, March 1999
- 1998 Bolivian National Academy of Science, La Paz, Bolivia, June 1998
- 1998 ENSO conference, Bolivian Meteorological Survey (SENAMHI), La Paz, Bolivia, June 1998
- 1996 Dept. of Geography, University of Chile, Santiago, Chile, Seminar, Oct. 1996
- 1995 Int. Workshop on Climate Change at High Elevation Sites, Wengen, Switzerland, Sept. 1995

National

- 2024 Colleges of Natural Science & Engineering, Univ. of Massachusetts, Amherst, MA, Seminar, Dec. 2024.
- 2023 Columbia Univ., Ocean and Climate Physics Seminar, Palisades, NY, Dec. 2023
- 2022 Lightning Talk Water research and resource management, Univ. at Albany, Dec. 2022
- 2022 Lightning Talk Endless Frontiers Seed-Funded Projects, Univ. at Albany, March 2022 (*virtual*)
- 2021 PIRE-CREATE webinars, June 2021 (*virtual*)

- 2020 PIRE-CREATE webinars, June 2020 (*virtual*)
- 2019 Dept. of Earth & Environmental Sciences, Lehigh Univ., Bethlehem, PA, Seminar, Oct. 2019
- 2019 NY State Senate Hearing - Environmental Conservation Committee, Capitol, Albany, Feb. 2019
- 2018 Dept. of Earth, Atmospheric & Planetary Sciences, Purdue Univ., West Lafayette, IN, Oct. 2018
- 2017 American Geophysical Union Fall Meeting, New Orleans, Dec. 2017
- 2017 Dept. of Anthropology, Yale University, New Haven, CT, Oct. 2017
- 2017 Dept. of Geology & Environmental Earth Science, Miami Univ., Oxford, OH, March 2017
- 2016 American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2016
- 2016 Last Millennium Reanalysis Workshop, San Juan Island, WA, Oct. 2016
- 2016 Dept. of Earth and Atmospheric Sciences, Cornell Univ., Ithaca NY, Seminar, Sept. 2016
- 2016 Dept. of Geology and Planetary Science, Univ. of Pittsburgh, PA, Seminar, April 2016
- 2015 American Geophysical Union Fall Meeting, Union Session, San Francisco, CA, Dec. 2015
- 2015 Dept. of Geological Sciences & Environmental Studies, SUNY Binghamton, NY, May 2015
- 2014 Panelist ECPA Discussion Forum, Organization of American States, Washington, DC, April 2014
- 2013 Panelist Interamerican Development Bank Sustainability Roundtable, Washington, DC, July 2013
- 2012 American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2012
- 2012 SynTraCE-21, PAGES Working Group meeting, Providence RI, Nov. 2012
- 2012 Panelist, ECPA Conference, Organization of American States, Washington DC, July 2012
- 2012 Dept. of Geosciences, Univ. of Massachusetts, Amherst, MA, Seminar, April 2012
- 2012 Dept. of Environmental Sciences, Rutgers Univ., New Brunswick, NJ, Seminar, March 2012
- 2011 Department of Earth Sciences, Dartmouth College, NH, Seminar, Nov. 2011
- 2011 Lamont-Doherty Earth Observatory, Columbia Univ., Palisades, NY, Seminar, May 2011
- 2010 Dept. of Earth & Environmental Sciences, RPI, Troy, Seminar, NY, April 2010
- 2009 American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2009
- 2009 Dept. of Geological Sciences & Environmental Studies, SUNY Binghamton, NY, Nov. 2009

- 2009 PAGES Open Science Meeting, Corvallis, OR, July 2009
- 2009 IPICS (International Partnership in Ice Core Science) Workshop, Corvallis, OR, July 2009
- 2009 Dept. of Biology, Univ. at Albany, Seminar, March 2009
- 2008 Dept. of Geology and Planetary Science, Univ. of Pittsburgh, PA, Seminar, Sept. 2008
- 2008 American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2008
- 2008 Speaker Meteorology Banquet, Dept. of Earth Sciences, SUNY Oneonta, NY, May 2008
- 2008 Greenfield Community College, Greenfield, MA, Seminar, April 2008
- 2007 Dept. of Earth & Atmospheric Sciences, Cornell Univ., Ithaca, NY, Seminar, Oct. 2007
- 2007 Department of Earth & Atmospheric Sciences, Univ. at Albany, Seminar, March 2007
- 2007 Int. Research Institute Climate & Society (IRI), Columbia Univ., Palisades, NY, Feb. 2007
- 2006 The World Bank, Climate Change Workshop, Washington D.C., Nov. 2006
- 2006 Brown Univ., Dept. of Geological Sciences, Providence, RI, Seminar, Oct. 2006
- 2006 Briefing of Congressional staffers (by invitation of Pew Center) Washington D.C., Oct. 2006
- 2006 AMQUA 2006 Biennial meeting, Bozeman, MT, Aug. 2006
- 2005 NSF-ESH PI Science Meeting, AGU Washington, D.C., May 2005
- 2005 Nicholas School of the Environment & Earth Sciences, Duke Univ., Durham, NC, Feb. 2005
- 2004 American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2004
- 2004 Workshop on tropical glaciation and climate dynamics, Univ. Washington, Seattle, May 2004
- 2004 Dartmouth College, Department of Earth Sciences, NH, Seminar, Feb. 2004
- 2002 Conference on Hadley Circulation, Int. Pacific Research Center, Honolulu, HI, Nov. 2002
- 2002 Dept. of Geological Sciences & Environmental Studies, SUNY Binghamton, NY, April 2002
- 2001 Dept. of Geological Sciences & Environmental Studies, SUNY Binghamton, NY, Oct. 2001
- 2001 Central Andean Paleoclimate Workshop, Tucson, AZ, Jan. 2001

PUBLIC ENGAGEMENT ACTIVITIES

(1st-authored and invited only)

2026	Speaker, Joven ANDEX Club de lecturas (in Spanish), Aug. 2026 (<i>virtual</i>)
2026	Speaker, Albany Area Amateur Astronomers, Siena College, NY, June 2026
2026	Instructor, Rise High -10 th Grade Environ. Education, Schenectady, NY, April 2026
2025	Speaker, Five Rivers Environmental Education Center, DEC, NY, Oct. 2025
2025	Instructor, Rise High -10 th Grade Environ. Education, Schenectady, NY, April 2025
2025	Keynote, Five Rivers Environ. Education Center Annual Meeting, NY, Feb. 2025
2025	Speaker, Peebles Island State Park, DEC, NY, Jan. 2025
2024	Speaker, Grafton Lakes State Park, DEC, NY, Nov. 2024
2024	Speaker, Burnt Hills / Ballston Spa Rotatory Club, Ballston Spa, NY, June 2024
2024	Speaker, Youth Climate Summit, RPI, Troy, NY, April 2024
2023	Panelist, Rising Tides – Art & Climate Change, Univ. at Albany, NY, Sept. 2023
2023	Instructor, PIRE Academy, SUNY Purchase, NY, April 2023
2022	Speaker, Bethlehem Public Library, Delmar, NY, August 2022
2022	Speaker, Bethlehem High School, Delmar, NY, April 2022
2022	Instructor, PIRE Academy, SUNY Oswego, NY, April 2022
2021	Speaker, Sustainable Futures Conference, Albany, NY, April 2021 (<i>virtual</i>)
2021	Speaker, Democracy Matters Meeting, Univ. at Albany, NY, April 2021 (<i>virtual</i>)
2020	Panelist, Democracy Matters Panel, Univ. at Albany, NY, Nov. 2020 (<i>virtual</i>)
2020	Speaker, Academy of the Holy Names, Albany, NY, March 2020
2019	Moderator, Climate Science Panel, Univ at Albany Emeritus Center, Nov. 2019
2019	Speaker, Science on Tap, Saratoga Springs, NY, April 2019
2019	Instructor, PIRE Academy, Purchase College, NY, April 2019
2019	Skype with a Scientist, SUNY Student Association & Univ. at Albany, Sept. 2018
2018	Speaker, Albany Jewish Community Center, Albany, NY, May 2018
2018	Panelist, Land Use & Sustainability Symposium, Albany Pine Bush Preserve, May 2018
2018	Keynote, Environmental Day, Greenville High School, Greenville, NY, April 2018
2017	Keynote, Science Teachers Association of New York State, Rochester, NY, Nov. 2017
2017	Speaker, Campus Conversations in Standish Series, University at Albany, Nov. 2017
2017	Speaker, Bethlehem Town Hall, Bethlehem, NY, April 2017
2017	Panelist, Faculty-lead discussion on role of Arts and Humanities, Univ. at Albany, Feb. 2017
2016	Speaker, University Art Museum, University at Albany, NY, Dec. 2016

- 2016 Speaker, Questar III BOCES Summer Institute for Science Teachers, Castleton, NY, July 2016
- 2016 Film Introduction, The Cooper Union Institute for Sustainable Design, New York, March 2016
- 2015 Speaker, Five Rivers Environmental Education Center, Delmar, NY, Nov. 2015
- 2015 Panelist, Anthropocene Panel, University at Albany, NY, Nov. 2015
- 2015 SUNY Business & Education Coop. Southern Tier (SUNYBEST), Binghamton, NY. Oct. 2015
- 2015 Plenary talk, Innovation Day, SUNY Binghamton, NY, April 2015
- 2015 Speaker, Capital District Humanist Society, Sage College, Albany, NY, Feb. 2015
- 2014 Plenary talk, Science Teachers Association of New York State, Rochester, NY, Nov. 2014
- 2013 Speaker, Explore UAlbany, University at Albany, Aug. 2013
- 2013 Lecturer, Summer Astronomy Institute for Science Teachers, RPI, Troy, NY, July 2013
- 2013 Speaker, The Doane Stuart School, Rensselaer, N.Y., April 2013
- 2013 Speaker, Virtual field trip on Climate Change, University at Albany, Oct. 2012
- 2012 Speaker, Academy of the Holy Names, Albany, NY, April 2012
- 2012 Keynote, Greater Capital Region Science & Engineering Fair, RPI, Troy, NY, March 2012
- 2011 Speaker, Falconer Natural History Lecture Series, Albany, NY, March 2011
- 2007 Host of "Swiss Climate Trail", Kids Science Festival, Boulder, CO, Sept. 2007
- 2007 Host of Climate booth at Cambridge Climate Trail, Boston, MA, April 2007

TEACHING

Courses taught University at Albany

- 2011-present ENV 450 / ATM 550 *Paleoclimatology* (2011-present)
- 2009-present ENV 490 *Major Topics in Environmental Science* (2009 - present)
- 2009-present ATM 552 *Climatic Change* (2009 - present)
- 2018 ATM 103: *Introduction to Climate Change* (2018)
- 2010-2013 ENV 395Z *Writing in Environmental or Geological Science* (2010-2013)
- 2008-2010 ATM 522 *Climate Variability and Predictability* (2008-2010)

Courses taught Humanities Institute for Lifelong Learning (HILL), Delmar NY

- 2020 & 2021 Global Warming: Impacts, Uncertainties, & Challenges Ahead

Courses taught University of Massachusetts

2006-2007 GEO-SCI 458 *Climatic Change* (2006-2007)

STUDENTS & POSTDOCS ADVISED

Habilitation committees

2016 Thomas Condom. Univ. Joseph Fourier, Grenoble, France. Member

Postdoctoral Research Associates

2025-present Anson Cheung. Univ. at Albany. Host
 2023-present Zhiqiang Lyu. Univ. at Albany. Host
 2023-2024 Zhaoxiangrui He. Univ. at Albany. Host
 2020 Roberto Serrano. Univ. at Albany. Host
 2018-2022 Ernesto Tejedor. Univ. at Albany. Host
 2014-2016 John Hurley. Univ. at Albany. Host

Doctoral Dissertation committees

In progress Zuhayr Ishmam. Univ at Albany. Chair
 In progress Chen Yuan. Univ at Albany. Chair
 In progress Frederick Boakye Oppong Univ at Albany. Member
 In progress Robert Ford. Univ at Albany. Member
 In progress Sumar Hart. Univ at Albany. Member
 In progress Aidan Alwang. Univ at Albany. Member
 In progress Matt Sinneberg. Univ. at Albany. Member
 2026 Skylar Hooler. Univ. at Albany. Member
 2025 Angela Ampuero. Univ. Sao Paulo, Brazil. External Referee
 2025 Nadja Landshuter. Univ. Erlangen-Nürnberg, Germany. External Referee
 2024 Rebecca Orrison. Univ. at Albany. Chair
 2024 Matthew Jenkins. Univ. at Albany. Member
 2024 Fangze Zhu. Univ. at Albany. Member
 2023 Zhaoxiangrui He. Univ. at Albany. Chair
 2023 Minn Lin Wong. Nanyang Technological Univ, Singapore. External Referee
 2022 Shengzhe Chen. Univ. at Albany. Member
 2022 Philémon Autin. Univ. Grenoble-Alpes, France. Member
 2021 Arielle Woods. Univ. Pittsburgh. Member
 2019 Oscar Chimborazo. Univ. at Albany. Chair
 2018 Chao-Yuan Yang. Univ. at Albany. Member
 2018 Christian Yarleque. Univ. at Albany. Chair
 2017 Matthew Gibbons. Univ. at Albany. Member
 2017 Bo Dong. Univ. at Albany. Member
 2016 Chris Colose. Univ. at Albany. Chair
 2016 Léo Martin. Univ. de Lorraine, Nancy, France. Member
 2015 Lise Mourre. Univ. Joseph Fourier, Grenoble, France. Member
 2015 Ruben Basantes. Univ. Joseph Fourier, Grenoble, France. Member
 2013 Bronwen Konecky. Brown Univ. Member
 2012 Emilie Dassie. Univ. at Albany. Member
 2011 Lisa Kanner. Univ. of Massachusetts. Member

2011	Marlis Hofer. Univ. of Innsbruck, Austria. External Referee
2011	Sophie Lewis. Australian National Univ. External Referee
2011	Samantha Langton. Univ. at Albany. Member
2010	Henry Wu. Univ. at Albany. Member
2010	Kinuyo Kanamaru. Univ. of Massachusetts. Member
2009	Ambarish Karmalkar. Univ. of Massachusetts. Member
2009	Broxton Bird. Univ. of Pittsburgh. Member
2006	James Bradbury. Univ. of Massachusetts. Member
2006	Roland Zech. Univ. of Bern, Switzerland. Member
2003	Edson Ramirez. Univ. of Paris, France. Member

Master's theses

In progress	Cassidy Ochoa. Univ at Albany. Chair
2026	Karen Conron Chamberlain. Univ at Albany. Chair
2026	Derick Appiah Kubi. Univ. at Albany. Chair
2026	Amanda Maminimini Univ. at Albany. Reader
2026	Wendy Paola Arias García. Univ. Sao Paulo, Brazil. Member
2026	Matt Sinneberg. Univ. at Albany. Reader
2023	Shelby Turner. Univ. at Albany. Chair
2023	Erin Potter. Univ. at Albany. Reader
2022	Thomas Favata. Univ. at Albany. Reader
2017	Hans Segura. Univ. Joseph Fourier, Grenoble, France. Member
2015	Juan Sulca. Univ. at Albany. Chair
2015	Ahmed Shaaban. Univ. at Albany. Reader
2014	Lauren Slawsky. Univ. at Albany. Reader
2013	Eric Franquist. Univ. at Albany. Chair
2012	Gavin Lemley. Univ. at Albany. Reader
2011	Dana McGlone. Univ. at Albany. Chair
2008	Rocio Urrutia. Univ. of Massachusetts. Chair
2007	Ezra Small. Univ. of Massachusetts. Member
2006	Rebecca Chan. Univ. of Massachusetts. Chair
2006	Jeanne Thibeault. Univ. of Massachusetts. Member
2006	Rachel Sorauf. Univ. of Massachusetts. Member

Visiting Students

2015-2016	Valdir Novello (Ph.D, 2016, Univ. of Sao Paulo). Host
2014	Claudio Bravo (M.S., 2014, Univ. of Chile). Host
2009-2010	Su Bin (Berkshire High School student). Mentor

SERVICE

DEPARTMENT SERVICE

2017-present	DAES Diversity, Equity & Inclusion Committee. Member
2008-present	DAES Undergraduate Committee. Member
2008-present	DAES ENV Internship Supervisor. Chair

2024-2025	SUNY Prodigy+ Search Committee. Chair
2019-2020	DAES Faculty Search Committee. Chair
2013-2014	DAES Program Review Committee. Member
2012-2013	DAES Faculty Search Committee. Member
2011-2012	DAES Faculty Search Committee. Chair
2010-2011	DAES Faculty Search Committee. Member

COLLEGE, UNIVERSITY & SUNY SERVICE

2026-2027	College of Arts & Sciences (CAS) Tenure and Promotion Committee. Member
2025-2027	Distinguished Professor Selection Committee. Member
2025	SUNY Chancellor's Horizon Award for Faculty Research and Scholarship Committee. Member
2025	New Faculty Academy on Research Excellence. Panelist
2024	Grant Writing Workshop for Postdocs. Instructor
2023	President's Award for Excellence in Research Selection Committee. Member
2020-2022	UAlbany Carbon Offset Advisory Group. Member
2020-2022	College of Arts & Sciences (CAS) Diversity and Inclusion Committee. Member
2017-2021	Advisory Committee - Center for Intl. Education & Global Strategy. Member
2017-2020	UAlbany Sustainability Plan – Research & Development Subcommittee. Member
2017	Selection Committee for Excellence Award in Librarianship. Member
2017	Strategic Planning Committee for Mapping Service Excellence. Member
2016	Terra Award Selection Committee. Member
2016	Presidential Innovation Fund for Research and Scholarship. Reviewer
2015-2016	Library and Information Science Subcommittee (2015-16). Chair
2014-2016	At-Large University Senator for College of Arts & Sciences. Member
2014-2016	Council on Libraries, Information Science and Computing (LISC). Member
2013-2014	Internationalization Working Group. Member
2009-2014	Paul C. Lemon Thesis Award Committee. Member
2012-2013	ASRC Director Search Committee. Member
2011-2012	ASRC Director Search Committee. Member
2010-2012	CAS Faculty Council (Acad. Planning & Acad. Support committees). Member

PROFESSIONAL SERVICE

Review Panels

NSF-P4Climate (National Science Foundation – Paleo Perspectives on Present and Projected Climate) Panel, (*virtual*).

NSF-OISE Global Centers Panel, (*virtual*).

NSF-OISE PIRE (Partnerships for International Research and Education) Panel, (*virtual*).

French National Research Agency (ANR) Panel, Paris, France (*served on 6 different ANR panels – 5 in person & 1 virtual*).

UK National Environmental Research Council (NERC) Panel, Lima, Peru.

NSF-P2C2 (National Science Foundation – Paleo-Perspectives on Climate Change) Panel, Alexandria, VA.

ECPA (Energy and Climate Partnership of the Americas, US Department of State) Small Competition Grant Panel, (*virtual*).

NOAA-CPO-CCDD (National Oceanic and Atmospheric Administration, Climate Program Office, Climate Change Data and Detection) Panel, Silver Spring, MD.

NOAA-OGP-CCDD (National Oceanic and Atmospheric Administration, Office of Global Programs, Climate Change Data and Detection) Panel, Silver Spring, MD.

Scientific Organizing Committees

2024	1 st Annual AccelNet-ACCORD Annual project meeting, Washington, DC.
2024	4 th PIRE-CREATE Annual project meeting, Ubatuba, Brazil.
2023	3 rd PIRE CREATE Academy for SUNY Env. Sci. students, SUNY Purchase.
2022	2 nd PIRE CREATE Academy for SUNY Env. Sci. students, SUNY Oswego.
2020	3 rd PIRE-CREATE Annual project meeting (<i>virtual</i>).
2019	MRI Synthesis workshop on future mountain climate change, San Francisco.
2019	PIRE Summer School, Sao Paulo, Brazil.
2019	2 nd PIRE-CREATE Annual project meeting, Sao Paulo, Brazil.
2019	1 st PIRE CREATE Academy for SUNY Env. Sci. students, SUNY Purchase.
2018	1 st PIRE-CREATE Annual project meeting, SUNY Albany.
2013	ACCION/UNESCO Workshop on Andean glacier retreat, Quito, Ecuador.
2013	ACCION/UNESCO Climate School on “Andean climate change. Lima, Peru.
2012	ACCION project meeting, Valdivia, Chile.
2012	UNESCO workshop on Andean glacier retreat. Lima, Peru.
2012	ACCION project meeting. Santiago, Chile.
2010	IGBP-PAGES I Symposium on South American paleoclimate. Valdivia, Chile.
2005	International Glaciological Society (IGS) Symposium on high-elevation glaciers and climate records. Lanzhou, China.
2003	Workshop on extreme events in South America. Sao Paulo, Brazil.

Session Convener & Session Chair

- 2026 AGU Fall Meeting. Convener, Session: 'GC029. Climate change, variability and impacts in Central and South America', San Francisco.
- 2025 AGU Fall Meeting. Convener, Session: 'GC031. Climate change, variability and impacts in Central and South America', New Orleans.
- 2025 International Mountain Conference (IMC). Convener, Session: 'Andean Climate Change: Observations, Research & Discovery', Innsbruck, Austria.
- 2024 AGU Fall Meeting. Convener, Session: 'GC044. Climate change, variability and impacts in South America', Washington, DC.
- 2023 AGU Fall Meeting. Convener, Session: 'GC026. Climate change, variability and impacts in South America', San Francisco.
- 2022 AGU Fall Meeting. Convener, Session: 'GC018. Changes and impacts of climate variability in South America', Chicago.
- 2021 AGU Fall Meeting. Convener, Session: 'GC019 Changes and impacts of climate variability in South America', New Orleans.
- 2019 AGU Fall Meeting. Convener, Session 'The hydroclimate of the Andes: Current understanding and future challenges'. San Francisco.
- 2019 AGU Fall Meeting. Convener, Session: 'Mountain weather and climate in a warmer world', San Francisco.
- 2018 International Biogeographical Society Meeting. Chair, Session 2. Évora, Portugal.
- 2016 AGU Fall Meeting. Convener, Session 'PP037: Water Isotope Systematics - Improving Modern and Paleoclimate Interpretations'. San Francisco.
- 2015 UNESCO workshop - Impact of glacier retreat in the Andes. Chair, Session 'Linking international, national and regional initiatives'. Santiago, Chile.
- 2014 EGU General Assembly. Convener, Session CR3.1 'Changing dynamics and environmental services of glacierized low latitude catchments'. Vienna.
- 2013 Foro Internacional Glaciares. Convener, Session 'Andean climate'. Huaraz, Peru.
- 2013 AGU Meeting of the Americas. Chair, Session GC24A 'Networks for Sustainable Monitoring of Global Environmental Change'. Cancun, Mexico.
- 2013 EGU General Assembly. Convener, Session CR3.8 'Tropical glaciers and climate dynamics'. Vienna.
- 2012 RIO+20 United Nations Conference on Sustainable Development. Convener, Session 'Water Resources: Uncertainties and opportunities - Case studies from Geographic Hotspots'. Pontifical Catholic University of Rio de Janeiro.
- 2010 PAGES II International Symposium on reconstructing climate variations in South America and the Antarctic Peninsula over the last 2000 years. Chair, Session 'Modern Climate'. Valdivia, Chile.
- 2010 AGU Meeting of the Americas. Convener, Session 'Reconstruction and modeling of precipitation over the tropical Americas during the Late Quaternary'. Foz do Iguassu, Brazil.

- 2008 AGU Fall Meeting. Convener, Session 'GC12A: Mountain ecosystems II: Tropical mountain glaciers, past and present'. San Francisco.
- 2006 PAGES Lotred-SA Meeting. Chair, Session 'Present climate variability in South America'. Malargue, Argentina.
- 2005 International Glaciological Society (IGS) International Symposium on high-elevation glaciers and climate records. Chair, Session 'Monsoon records in high-elevation glaciers' Lanzhou, China.

Associate & Guest Editor / Contributing Author

- 2019-2020 Guest Editor, *Frontiers in Environmental Science*, Special issue on climate change in the Andes.
- 2016-2018 Associate Editor, *Geophysical Research Letters*.
- 2006 Guest Editor, *Annals of Glaciology*, Vol. 43, Special volume on high-elevation glaciers and climate records.
- 2001 Contributing Author, *Climate Change 2001 – The Scientific Basis*. Contribution of WG1 to 3rd Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) – Chapter 2: Observed climate variability and change.

Proposal Reviewer

ANR (Agence Nationale de la Recherche, France) / ABC/J Early Career Research Award (Univ. Aachen, Bonn, Cologne & Juelich - Germany) / DAAD (German Academic Exchange Service) / DFG (German Science Foundation) / EC (European Commission), FONDECYT (Chilean Science Foundation) / FWF (Austrian Science Foundation) / IAI (Inter-American Institute for Global Change) / KACST (King Abdulaziz City for Science and Technology, Science Agency of Saudi Arabia) / MRI (Mountain Research Initiative) / National Geographic / NASA (Postdoctoral Program) / NERC (National Environmental Research Council, UK) / NOAA (Climate Change Data and Detection; Climate Prediction Program for the Americas) / NSF (Arctic Sciences; Antarctic Sciences; Office of Polar Programs; Climate & Large-Scale Dynamics; Earth System History; Frontier Research in Earth Sciences, Geography and Regional Science; Geomorphology and Land Use Dynamics; Ocean Sciences; OISE-Partnerships in International Research and Education (PIRE); OISE-Global Centers; P4Climate; Paleoclimate; PaleoPerspectives on Climate Change (P2C2); Pan American Advanced Studies Institutes; Postdoctoral Fellowship Program; Tectonics) / NWO (Netherlands Organization for Scientific Research) / SNSF (Swiss Science Foundation - Division for Physical and Engineering Sciences) / SUNY Empire Innovations Program / The Implementation Group, Inc. / Universidad Mayor de San Andres (Bolivia) / US Department of Energy / U.S. Department of State (Energy and Climate Partnership of the Americas-ECPA) / University of Arizona (ADVANCE Program) / World Bank

Journal Reviewer

Agriculture, Ecosystems and Environment / AGU Advances / Annals of Glaciology / Annals of the American Association of Geographers / Arctic Antarctic and Alpine Research / Boundary Layer Meteorology / Climate Dynamics / Climate of the Past / Climatic Change / Comptes Rendus Géoscience / Earth and Planetary Science Letters / Earth's Future / Earth System Dynamics / Environmental Conservation / Environmental Processes / Environmental Research Letters / EOS / Geochimica et Cosmochimica Acta / Geografiska Annaler / Geology / Geophysical Research Letters / Global and Planetary Change / Global Change Biology / Hydrological Sciences Journal / Hydrological Processes / Hydrology and Earth System Science /

International Journal of Climatology / Journal of Applied Meteorology and Climatology / Journal of Arid Environments / Journal of Biogeography / Journal of Climate / Journal of Geophysical Research – Atmospheres / Journal of Geophysical Research – Earth Surface / Journal of Glaciology / Journal of Hydrology / Journal of Hydrometeorology / Journal of Mountain Science / Journal of South American Earth Sciences / Monthly Weather Review / Nature / Nature Climate Change / Nature Geoscience / Palaeogeography Palaeoclimatology Palaeoecology / Paleoceanography & Paleoclimatology / PloS One / Proceedings of the National Academy of Sciences / Quaternary Research / Quaternary Science Reviews / Rapid Communications in Mass Spectrometry / Science / The Cryosphere / The Holocene / Water Research / Water Resources Research / Zentralblatt fuer Geologie und Palaeontologie

PROFESSIONAL AFFILIATIONS

American Geophysical Union (AGU) / American Meteorological Society (AMS) / American Quaternary Association (AMQUA) / American Association for the Advancement of Science (AAAS) / European Geosciences Union (EGU)