

KEVIN J. ANCHUKAITIS

Zhang, X., J. Li, S-P Xie, E.R. Cook, R.D'Arrigo, **K.J. Anchukaitis**, Unprecedented 21st-century water scarcity in southwestern North America since 500 CE, submitted, 2025

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Conference Proceedings and Reports

- Hessl, A.E., N. Pederson, O. Byambasuran, **K.J. Anchukaitis**, and C. Leland, How Unusual Was the 21st Century Drought in Mongolia? Placing Recent Extremes in a 2000-Year Context, *Proceedings of the Trans-disciplinary Research Conference: Building Resilience of Mongolian Rangelands*, Ulaanbaatar, Mongolia, doi:10.25675/10217/181727, 80–86, 2015.
- Cook, E.R., R.D. D’Arrigo, and **K.J. Anchukaitis**, ENSO Reconstructions from Long Tree-Ring Chronologies: Unifying the Differences? in *Workshop on ENSO reconstructions for the past 500 years*, edited by H. F. Diaz, MEDIAS-FRANCE/METEO-FRANCE/NOAA, Moorea, French Polynesia, 2008.

- Laia Andreu-Hayles, **2009–2012**, Postdoctoral Fellow and Marie Curie Postdoctoral Fellow, Lamont Doherty Earth Observatory (co-mentor with Rosanne D'Arrigo). Currently Lamont Associate Research Professor, Lamont-Doherty Earth Observatory of Columbia University.
- Dario Martin-Benito, **2012–2013**, Postdoctoral Scientist, Lamont Doherty Earth Observatory. Currently Senior Scientist (*Científico Titular*) at the Forest Research Center, Instituto Nacional de Investigación, Madrid, Spain
- Daniel Griffin, **2013–2014**, WHOI Postdoctoral Scholar and NOAA/UCAR Climate and Global Change Postdoctoral Fellowship, Woods Hole Oceanographic Institution. Currently Associate Professor, University of Minnesota.
- Bethany Coulthard, **2016–2018**, Postdoctoral Research Scientist, Laboratory of Tree-Ring Research and School of Geography and Development, University of Arizona. Currently Marine Projects Supervisor, Cowichan Tribes, British Columbia
- Nicolas Gauthier, **2019–2021**, Postdoctoral Research Scientist, Laboratory of Tree-Ring Research and School of Geography, Development, and Environment, University of Arizona. Currently Assistant Curator (tenure track), AI for Cultural and Biological Diversity, Florida Museum of Natural History, University of Florida

Graduate Students

- Gloria Jimenez, **Ph.D. 2018**, Geosciences, University of Arizona (co-advisor with Julie Cole, 2017–2018)
- Jessie Pearl, **Ph.D. 2019**, Geosciences, University of Arizona (2014–2019)
- Jonathan King, **Ph.D. 2022**, Geosciences, University of Arizona (2018–2022)
- Talia Anderson, **M.A. 2020; Ph.D. 2024**, Geography, University of Arizona (2017–2024)
- Julie Edwards, **M.A. 2020; Ph.D. 2024**, Geography, University of Arizona (2018–2024)
- Kira Harris, **M.A. 2022**, Ph.D., Geography, University of Arizona (2020–present)
- Ana Isabel González Mendez, **M.A. 2024**, Ph.D., Geography, University of Arizona (2022–present)

Dissertation, Thesis Committee, or External Reviewer

- Petra Breitenmoser, **2013**, external referee, Ph.D., University of Bern, Switzerland
- Kristina Seftigen, **2014**, *fakultetsopponent*, Ph.D., Gothenburg University, Sweden
- Brewster Malevich, **2017**, committee member, Ph.D., Geosciences, University of Arizona
- Diego Pons, **2017**, external committee member, Ph.D., University of Denver
- Patrick Murphy, **2018** committee member, M.S., Geography, University of Arizona
- Sarah Frederick, **2018** committee member, M.S., Geography, University of Arizona
- Grace Windler, **2018** committee member, M.S., Geosciences, University of Arizona
- Chris Zemp, **2018**, committee member, M.S., Geography, University of Arizona
- Anne Billingsley, **2019**, committee member, Ph.D., Geosciences, University of Arizona
- Grace Windler, **2021**, committee member, Ph.D., Geosciences, University of Arizona
- Emma Reed, **2021**, committee member, Ph.D., Geosciences, University of Arizona
- Lucie Luecke, **2021**, external examiner, Ph.D., School of Geosciences, University of Edinburgh
- Zack Grzywacz, **2021**, external committee member, M.S., Geography, West Virginia University
- William Tintor, **2021**, committee member, Ph.D., Geography, University of Arizona
- Manuel Hernandez, **2022**, external committee member, Ph.D., Geography, University of North Carolina
- Aria Blumm, **2022**, committee member, M.S., Geosciences, University of Arizona
- Dervla Meegan Kumar, **2022**, committee member, Ph.D., Geosciences, University of Arizona

Andrew Zimmer, **2022**, committee member, Ph.D., Geography, University of Arizona
 Holly Thomas, **2023**, committee member, M.S., Geosciences, University of Arizona
 Brandon Strange, **2023**, committee member, Ph.D., School of Natural Resources and the Environment, University of Arizona
 Jingshu Wei, **2025**, committee member, Ph.D., School of Natural Resources and the Environment, University of Arizona
 Nathan Hwangbo, **2025**, external committee member, Ph.D., Statistics & Data Science, UCLA
 Asiya Badarunnisa Sainudeen, committee member, Ph.D., Geosciences, University of Arizona
 Mudith Weerabaddana, committee member, Ph.D., Geosciences, University of Arizona
 Talitha Hope Neesham-McTiernan, committee member, Ph.D., Geography, University of Arizona
 Alex Saunders, committee member, Ph.D., Geography, University of Arizona
 Kai Lepley, committee member, Ph.D., Geography, University of Arizona
 Elise Arellano-Thompson, committee member, Ph.D., Geography, University of Arizona

Undergraduates and Interns

Kristin Campbell, **2010**, Climate and Society Intern, Columbia University (co-mentor with Ben Cook)
 Hannah Aizenman, **2011**, Google Summer of Code, City University of New York and Columbia University (co-mentor with Julien Emile-Geay and Jason Smerdon)
 Diego Pons, **2011**, US State Department and LASPAU Global Change Professional Fellow
 Liora Hostyk, **2012**, Lamont-Doherty Earth Observatory Summer Internship (NSF REU), Barnard College and Columbia University (co-mentor with Ben Cook and Richard Seager).
 Manuel Hernandez, **2013, 2014**, WHOI Summer Student Fellow and UCAR/NCAR SOARS protégé, Texas A&M University (co-mentor with Caroline Ummenhofer).
 Mariel Herzog, **2013**, Lamont-Doherty Earth Observatory Summer Internship (NSF REU), University of Colorado (co-mentor with Allegra LeGrande)
 Laura Fleming, **2013, 2014–2015**, Northeastern University Co-op Semester, Visiting Student at Woods Hole Oceanographic Institution
 Melissa Schwan, **2016**, University of Arizona, Department of Geosciences, Senior Honors Thesis
 Andrea Lara-Garcia, **2020–2021**, University of Arizona, School of Geography, Development, and Environment, Senior Honors Thesis
 Zanubia Sethuraju, **2021–2022**, University of Arizona, School of Geography, Development, and Environment, undergraduate research intern and Senior Honors Thesis
 Ifeoluwa Godwin Ale, **2022–2024**, University of Arizona, College of Science, Computer Science, undergraduate research programmer
 Francisca Molina, **2023–2024**, University of Arizona, College of Social and Behavior Sciences, Environmental Studies and Law, undergraduate research assistant
 Natalianna Ferrara, **2024** University of Arizona, College of Social and Behavior Sciences, Anthropology and History, undergraduate research assistant
 Yoni Goodman, **2025**, University of Arizona, College of Social and Behavior Sciences, Geography and Chinese Language, undergraduate research assistant

TEACHING

UNIVERSITY OF ARIZONA

Tucson, AZ

School of Geography, Development, and Environment

GEOG 170A1 *Introduction to Physical Geography* (Spring)

GEOG 230 *Our Changing Climate* (Autumn)

GEOG 430/530 *The Climate System* (Spring)

GEOS 599-010 *Models of the North Atlantic jet (Independent Study)* (Spring 2018)

GEOG 696C *Spatiotemporal Data Analysis* (Autumn 2016, 2019, 2021, 2023)
 GEOG 696C *State-of-the-Art in Climate Science* (Autumn 2020)
 GEOG 696F *Advanced Methods and Techniques* (Autumn 2024)
 GEOG 696M *Hydroclimate: Past, Present, and Future* (Autumn 2017)
 GEOG 699-013 *Topics in Paleobiogeography (Independent Study)* (Spring 2016)
 GEOG 699-013 *Statistics for Biogeography (Independent Study)* (Spring 2017)

MIT-WHOI JOINT PROGRAM IN OCEANOGRAPHY Cambridge and Woods Hole, MA
Marine Geology and Geophysics
 12.708 *Topics in Paleoceanography* (Autumn 2013)

COLUMBIA UNIVERSITY New York, NY
Masters in Sustainability Management Program
 SUMA K4230 *The Earth's Climate System* (Spring 2011, Spring 2012)

Department of Earth and Environmental Science
 EESC V2011 *Earth's Environmental Systems: The Climate System* (Spring 2012)

GRANTS

Current and Active

- “Renewed support for paleoCAMP: A multidisciplinary summer school for graduate students in paleoclimatology”, PI: Jessica Tierney, co-PIs: **K.J. Anchukaitis**, Sylvia Dee, Daniel Ibarra, Kathleen Johnson, Heising-Simons Foundation, 01/2025 – 12/2027, \$450,000
- “The North American Temperature Atlas–A Climate Field Reconstruction for Investigating Effects of Temperature on Past Droughts”, PI: Karen King, coPI: **K.J. Anchukaitis**, J. Maxwell, G. Harley, E.R. Cook, NSF P4CLIMATE, AGS-2402386, 08/2024-08/2027, \$34,522 (UA scope only)
- “Intertropical Convergence Zone Variations from Stable Oxygen Isotope Tree-ring Records in the Tropical Americas”, PI: Laia Andreu-Hayles, coPI: **K.J. Anchukaitis** and Diego Pons, NSF P4CLIMATE, AGS-2303525, 02/2024-01/2027, \$192,386 (UA scope only)
- “Pilot dendrochronology studies in the Maya Biosphere Reserve”, PI: **K.J. Anchukaitis**, University of Arizona Social and Behavioral Science Research Institute (SBSRI), Faculty Small Grant, 04/2023-03/2024, \$4,656
- “Indigenous forest management in a non-stationary climate”, PI: Diego Pons, co-PIs: **K.J. Anchukaitis**, M. Taylor, R. DeRose, N. vonHedemann, R. Trosper, NSF Dynamics of Integrated Socio-Environmental Systems (DISES), 01/2023-06/2027, \$1,599,397
- “MRI2: Acquisition of a Mini Carbon Dating System for Multi-Millennial, Multi-User Sequences of Annually Resolved 14C and Other High Precision Applications”, PI: C. Pearson, co-PIs: B. Black, **K.J. Anchukaitis**, and K. Thirumalai, NSF Major Research Instrumentation Program (MRI), 09/2022-08/2025, \$2,032,379
- “Tracking Divergent Warming and Tree Growth at Arctic Treeline”, PI: Rosanne D’Arrigo, co-PIs: **K.J. Anchukaitis** and Benjamin Gaglioti, NSF Arctic Natural Sciences, ANS-2124889, 03/2022-02/2025, \$203,991
- “High-Resolution Reconstruction of Last Millennium North American Arctic Temperatures Using Quantitative Wood Anatomy”, PI: **K.J. Anchukaitis**, coPIs: Adam Csank and Stephanie McAfee, NSF Paleoclimate Perspectives on Climate Change (P2C2), AGS-2102993, 08/2021-07/2025, \$471,704
- “Rainfall variability, extreme events, and vulnerability in heterogeneous social and environmental systems”, PI: **K.J. Anchukaitis**, coPIs: Matthew Taylor, Diego Pons, Tom Evans, Diana Liverman, NSF Human-Environment and Geographical Sciences (HEGS), BCS-2049657, 06/2021 – 11/2025, \$396,593

- “PaleoCAMP (Paleoclimate training in Climate Archives, Models, and Proxies): A multidisciplinary summer school for graduate students in paleoclimatology”, PI: Jessica Tierney, co-PIs: **K.J. Anchukaitis**, Tripti Bhattacharya, Daniel Ibarra, Kathleen Johnson, Heising-Simons Foundation, 01/2021 – 12/2024, \$425,166

Completed

- “OpenDendro - Advanced Open-source Tools for Paleoenvironmental Reconstruction”, PI: Andy Bunn, coPIs: Edward Cook, **K.J. Anchukaitis**, Tyson Swetnam, NSF Paleoclimate, AGS-2054516, 06/2021-05/2023, No-Cost Extension to 09/2024, \$143,148
- “Spatiotemporal Variability in Western United States Snowpack During the Common Era”, PI: **K.J. Anchukaitis**, co-PI: Bethany Coulthard, NSF Paleoclimate Perspectives on Climate Change (P2C2), AGS-1803995, 09/01/2018 – 08/31/2021, \$397,055; No-Cost Extension to 08/2024
- “Drivers of Oscillations in Western US Cool-Season Precipitation”, PI: Park Williams, coPI: **K.J. Anchukaitis**, California Department of Water Resources, 10/2021 – 9/2022, No-Cost Extension to 09/2023, \$213,182
- “Developing Tree-Ring Based Streamflow Reconstructions for Large and Complex River Basins”, PI: **K.J. Anchukaitis**, co-PI: Bethany Coulthard, NSF Geography and Spatial Sciences, BCS-1759629, 09/01/2018 – 02/28/2022, \$279,672; No-Cost Extension to 03/2023
- “Precision dating of North American medieval megadroughts using cosmogenic radiocarbon spikes in tree-ring chronologies”, PI: **K.J. Anchukaitis**, University of Arizona Social and Behavioral Science Research Institute (SBSRI), Faculty Small Grant, 03/2022-02/2023, \$4,950
- “2000 Years of Variability in the Southern Annular Mode (SAM) from Tree Rings and Ice”, PI: Amy Hessl, co-PIs: **K.J. Anchukaitis**, NSF Paleoclimate Perspectives on Climate Change (P2C2), AGS-1803946, 02/01/2019 – 01/31/2022, \$369,192 (UA Scope: \$149,929); No-Cost Extension to 02/2023
- “A stable isotope dendroclimatology approach toward reconstructing paleoclimate dynamics in Central America”, PIs: Laia Andreu-Hayles and **K.J. Anchukaitis**, Columbia University Climate Center, 12/2020, \$8,360
- “The global climate response to volcanic eruptions in the Last Millennium Reanalysis”, PI: J. Emile-Geay, co-PIs: **K.J. Anchukaitis** and G. Hakim. NOAA Climate Program Office, Climate Monitoring Program and Climate Variability and Predictability Program, NA18OAR4310420, 09/01/2018 – 08/31/2020, \$299,973 (UA Scope: \$64,004)
- “Stable and Radiogenic Isotope Approach to Paleoclimate Dynamics in Central America” PI: **K.J. Anchukaitis**, University of Arizona, Research, Discovery & Innovation (RDI) International Research and Program Development Grant, 07/01/2018-06/30/2019, \$26,510
- “Recent Northeastern United States Temperature Records in the Context of the Late Holocene” PIs: **K.J. Anchukaitis**, Jeff Donnelly, and Neil Pederson, NSF Paleoclimate Perspectives on Climate Change (P2C2), AGS-1304262, 08/2013 – 07/2016 (No Cost Extensions to 07/2019), \$447,183
- “Past Ocean-Atmosphere Variability from Spatiotemporal Patterns of North Atlantic Climate During the Common Era” (with Lamont-Doherty Earth Observatory, PI: Ed Cook), coPIs: **K.J. Anchukaitis**, Rosanne D’Arrigo. NSF Paleoclimate Perspectives on Climate Change (P2C2), AGS-1501856, 05/2015 – 04/2018 (No Cost Extensions to 04/2019), (UA scope: \$93,491)
- “Spatiotemporal Variability of Northwestern North American Temperatures in Response to Climatic Forcing” (with Lamont-Doherty Earth Observatory, PI: Rosanne D’Arrigo), coPIs: **K.J. Anchukaitis**, Laia Andreu-Hayles, Greg Wiles, Rob Wilson, NSF Paleoclimate Perspectives on Climate Change (P2C2), AGS-1501834, 05/2015 – 04/2018 (No Cost Extensions to 04/2019), (UA scope: \$105,155)

- “Water Resource Relevant Hydroclimatic Reconstructions for Western North America” PI: **K.J. Anchukaitis**, Postdoctoral Researcher: Bethany Coulthard. U.S. Geological Survey (G16AC00266), 09/02/2016 – 9/01/2018, \$118,886
- “Reconstructing Changes in Asian Monsoon Circulation during the Last Millennium from Stable Isotopes in Tropical Tree Rings” PIs: **K.J. Anchukaitis**, B.M. Buckley, C. Ummenhofer, NSF Paleoclimate Perspectives on Climate Change (P2C2), AGS-1203818, 8/15/2012 – 8/14/2015 (No Cost Extension to 08/2017), \$688,279
- “Reconstructing Droughts in the Tropical Americas Using Tree-Ring Analysis” PIs: **K.J. Anchukaitis** and Matthew Taylor, NSF Geography and Spatial Sciences, BCS-1263609, 07/2013–12/2016, \$278,599
- “CNH: Pluvials, Droughts, Energetics, and the Mongol Empire” (with West Virginia University, PI: Amy Hessler), coPIs: Neil Pederson and **K.J. Anchukaitis**, Coupled Natural-Human Systems (CNH), BCS-1210360, 05/2012 – 04/2016 (No Cost Extension to 05/2017) , \$1,394,398; (Pederson & Anchukaitis scope: \$317,576)
- “Tree-Ring Reconstructions of Western North Pacific Climate Dynamics”, PIs: R.D. D’Arrigo, **K.J. Anchukaitis**, N. Davi. NSF Paleoclimate Perspectives on Climate Change (P2C2) AGS-1159430, 06/2012 – 05/2015 (No Cost Extension to 05/2016), \$686,982
- “Past and Future Drought Variability in the Mediterranean Basin” PI: Ramzi Touchan, coPIs: **K.J. Anchukaitis**, David Meko, and B.I. Cook, NSF Paleoclimate Perspectives on Climate Change (P2C2) AGS-1103450, 06/2011 – 05/2014, No-cost extension to 5/2015, (Anchukaitis and Cook scope: \$70,388).
- “Paleoclimate shocks: environmental variability, human vulnerability, and societal adaptation during the last millennium in the Greater Mekong Basin”, PIs: B.M. Buckley, T. Heikkilä, **K.J. Anchukaitis**, and 7 others, Coupled Natural-Human Systems (CNH), ATM-0908971, 10/2009 – 9/2013 (No Cost Extension to 09/2014), \$1,401,351
- “Shifting Seasonality of Northern Forest Response to Arctic Environmental Change”, PIs: R.D. D’Arrigo, **K.J. Anchukaitis**, NSF ARC-0902051, 4/2009 – 3/2012, \$381,154
- “Developing multicentury drought reconstructions from Guatemala and the context for past and future hydroclimatic change”, PIs: **K.J. Anchukaitis**, M. Taylor, and E. Castellanos, Geography and Spatial Sciences, NSF BCS-0852652, 04/2009 - 03/2012 (No Cost Extension to 03/2013), \$203,351
- “Annual climate during the rise and fall of the Great Mongol Empire: Rapid collection of an ancient and endangered paleoclimate resource”, PIs: N. Pederson and **K.J. Anchukaitis**, Columbia University Climate Center, 11/2011, \$7,850.
- “Building capacity for managing climate risk from drought in Guatemala”, PI: **K.J. Anchukaitis**, Columbia University Earth Institute Cross-Cutting Initiative, 11/2010, \$24,000
- “Construction of a device for rapid cellulose extraction from wood for applications in isotope dendrochronology and organic biogeochemistry”, PI: **K.J. Anchukaitis**, Columbia University Climate Center, 05/2011, \$8,000
- “MRI-R2: Acquisition of Stable Isotope Instrumentation for High Precision Paleoclimatic and Environmental Research at the Lamont Doherty Earth Observatory”, PIs: B. Linsley, B. Yan, **K.J. Anchukaitis**, P. deMenocal, P. Schlosser, NSF AGS-0959148, 5/2010 – 4/2012, \$811,868
- “Dating the World Trade Center Ship”, PIs: B.M. Buckley, **K.J. Anchukaitis**, N. Pederson, E.R. Cook, R.D. D’Arrigo. AKRF, Inc., The Lower Manhattan Development Corporation, and The Port Authority of NY & NJ, 8/2010 – 7/2011, \$12,306
- “Establishing the stable oxygen isotope signature of precipitation in the Central Highlands of Vietnam for application to dendroclimatology”, PI: **K.J. Anchukaitis** and B.M. Buckley, Columbia University Climate Center, 11/2008, \$8,000
- “Assessing the dendrochronological potential of tree species in highland Guatemala”, PI: **K.J. Anchukaitis**, Columbia University Climate Center, 12/2007, \$5,000

HONORS, AWARDS, AND FELLOWSHIPS (SINCE 2007)

Hammond Distinguished Lecturer, University of Tennessee, 2024
Willi Dansgaard Award, Paleoclimatology and Paleoclimatology Section, American Geophysical Union, 2023
Udall Center for Studies in Public Policy Fellowship, University of Arizona, Autumn 2018
George H. Davis Travel Fellowship, Office of Research, Discovery & Innovation, University of Arizona, Spring 2018
Research Professorship, College of Social and Behavioral Sciences, University of Arizona, Autumn 2017
Henry Cowles Award for Excellence in Publication, Biogeography Specialty Group, Association of American Geographers, 2015
Stephen S. Visser Lecturer in Climatology, Indiana University, February 2015
Marsico Visiting Scholar, University of Denver, Autumn 2011
Newton International Postdoctoral Fellowship at Oxford University, The Royal Society (United Kingdom), 2009-2011 (*declined*)
Andrew Ellicott Douglass Memorial Scholarship, The University of Arizona, 2007
US Department of Energy (DOE) Global Change Education Program, Graduate Research and Education Fellowship (GCEP-GREF), 2004 – 2006; *declined* in 2007.
NSF Integrative Graduate Education Research and Training Fellowship (IGERT), IGERT Program for Archaeological Sciences, The University of Arizona, 2003 – 2004, 2007.
Galileo Circle Scholar, The University of Arizona College of Science, 2004
U.S. Environmental Protection Agency (EPA) STAR Fellowship, 1999 – 2001.

PRESENTATIONS Recent (previous 3 years only) † = postdoctoral author, ‡ = student author

- [45] **Anchukaitis, K.J.**, J.E. Tierney, S. Dee, J. Zhu, Pacific atmospheric circulation from paleoclimate data assimilation via the ensemble Kalman filter, Poster presented at the 2025 Annual Meeting of the American Meteorological Society, New Orleans, LA, January 12-16, 2025
- [44] Ibarra, D., J.E. Tierney, **K.J. Anchukaitis**, T. Bhattacharya, K. Johnson, paleoCAMP (Paleoclimate Training in Climate Archives, Models, and Proxies): Developing an Inclusive Graduate Student Summer School in Paleoclimatology, Abstract ED51A-04 presented at the 2024 Fall Meeting, American Geophysical Union, Washington, DC, December 13-17, 2024 (**Invited**)
- [43] ‡ Harris, K., J.E. Tierney, S. Muñoz, **K.J. Anchukaitis**, Decadal-Scale Variability in the North American Monsoon system during the Common Era, Abstract PP42B-02 presented at the 2024 Fall Meeting, American Geophysical Union, Washington, DC, December 13-17, 2024
- [42] ‡ González-Mendez, I., **K.J. Anchukaitis**, C. Pearson, D. Pons, D. Frank, J. Edwards, E. Luna, W. Pérez, Annual chronology and climate signals in *Swietenia macrophylla* and *Cedrela odorata* (Meliaceae) in the Maya Lowlands, Abstract PP52A-03 presented at the 2024 Fall Meeting, American Geophysical Union, Washington, DC, December 13-17, 2024
- [41] Williams, A.P., K.A. McKinnon, **K.J. Anchukaitis**, A. Gershunov, A.M. Varuolo-Clarke, R.E.S. Clemesha, H. Liu, Anthropogenic intensification of cool-season precipitation is not yet detectable across the western United States, Abstract A23G-2054 presented at the 2024 Fall Meeting, American Geophysical Union, Washington, DC, December 13-17, 2024

- [40] Cook, B.I., E.R. Cook, **K.J. Anchukaitis**, D. Singh, Characterizing the 2010 Russian heatwave-Pakistan flood concurrent extreme over the last millennium using the Great Eurasian Drought Atlas, Abstract PP52A-01 presented at the 2024 Fall Meeting, American Geophysical Union, Washington, DC, December 13-17, 2024
- [39] ‡ Anderson, T.G., D. Pons, M.J. Taylor, A. Xuruc, H. Rodríguez-Salvatierra, Z. Guido, J.A. Sullivan, D. Liverman, **K.J. Anchukaitis**, Complexity and mediating factors in farmers' climate perceptions and agricultural adaptation strategies in the Guatemalan Dry Corridor, Paper presented at the 38th Conference of Latin American Geography, Old San Juan, Puerto Rico, May 22-26, 2024
- [38] **Anchukaitis, K.J.**, J.A. Edwards, E.R. Cook, J.R. Southon, B. Gaglioti, B. Hatchett, P. Krusic, A.P. Williams, K. King, S.W. Stine, Chronology and climate context for medieval megadrought in the eastern Sierra Nevada, Paper presented at the annual meeting of the American Association of Geographers, Honolulu, Hawaii, April 16-20, 2024
- [37] Leland, C., N. Davi, R.D. D'Arrigo, L. Andreu-Hayles, A. Pacheco-Solana, T. Porter, M. Pisaric, **K.J. Anchukaitis**, J. Edwards, S. Beaulieu The Curious Case of 1959: Tree-ring Evidence of an Extreme Cold Event in Northwestern North America, Paper presented at the annual meeting of the American Association of Geographers, Honolulu, Hawaii, April 16-20, 2024
- [36] **Anchukaitis, K.J.**, All constraints but nature's: hydroclimate in western North America during the Common Era, Hammond Distinguished Lecture, University of Tennessee, April 4, 2024 (**Invited**)
- [35] **Anchukaitis, K.J.**, Z.K. Sethuraju, D. Pons, J. Edwards, T.G. Anderson, I. Gonzalez-Mendez, M. Taylor, Dendrochronological evidence for the impacts of the 1902 Santa Maria volcanic eruption on the forests of western Guatemala, 12th Cities on Volcanoes conference, Antigua, Guatemala, February 11-17, 2024
- [34] ‡ Anderson, T.G., K. McKinnon, D. Pons, **K.J. Anchukaitis**, How exceptional was the 2015-2019 Central American Drought? Abstract A43H-03 presented at the 2023 Fall Meeting, American Geophysical Union, San Francisco, CA, December 10-16, 2023
- [33] **Anchukaitis, K.J.**, J.A. Edwards, E.R. Cook, J.R. Southon, B. Gaglioti, B. Hatchett, P. Krusic, A.P. Williams, K. King, S.W. Stine, Chronology and climate context for medieval megadrought in the eastern Sierra Nevada, Abstract PP32B-02 presented at the 2023 Fall Meeting, American Geophysical Union, San Francisco, CA, December 10-16, 2023
- [32] King, K.E., E.R. Cook, **K.J. Anchukaitis**, B.I. Cook, J.E. Smerdon, R. Seager, G. Harley, B. Spei, The Increasing Prevalence of Hot Drought Across Western North America Since the 16th Century, Abstract PP32B-03 presented at the 2023 Fall Meeting, American Geophysical Union, San Francisco, CA, December 10-16, 2023
- [31] ‡ Edwards, J., **K.J. Anchukaitis**, S. McAfee, A. Csank, L. Andreu-Hayles, R. D'Arrigo, G. von Arx, Reconstructing Past Arctic Climate Variability through High-Resolution Tree-Ring Wood Anatomical Chronologies from Northern Alaska, Abstract PP32B-04 presented at the 2023 Fall Meeting, American Geophysical Union, San Francisco, CA, December 10-16, 2023
- [30] **Anchukaitis, K.J.**, Reconstructed snowpack variability in the western United States over the last millennium, ESS Seminar Series, Stanford Doerr School of Sustainability, Stanford University, May 11, 2023
- [29] ‡ Edwards, J., **K.J. Anchukaitis**, S. McAfee, A. Csank, L. Andreu-Hayles, R. D'Arrigo, G. von Arx, Records of past temperatures in wood anatomy of high-latitude trees, Paper presented at TRACE 2023 - Tree-Rings in Archaeology, Climatology and Ecology, Coimbra, Portugal, May 8-13, 2023
- [28] Burke, A., H. Innes, L. Crick, **K.J. Anchukaitis**, W. Hutchison, J. McConnell, J. Rae, M. Sigl, R. Wilson, High-resolution sulfur isotopes from ice cores: improved estimates of the volcanic forcing of climate, EGU General Assembly 2023, EGU23-7109, <https://doi.org/10.5194/egusphere-egu23-7109>, Vienna, Austria, April 24-28, 2023.

- [27] ‡ González-Mendez, A.I., **K.J. Anchukaitis**, Z. Sethuraju, T.G. Anderson, K. Morino, D. Pons, M. Taylor, Dendrochronology and quantitative wood anatomy of Guatemala’s high elevation conifers, Paper presented at the annual meeting of the American Association of Geographers, Denver, Colorado, March 23-27, 2023
- [26] ‡ Anderson, T.G., K. McKinnon, D. Pons, **K.J. Anchukaitis**, How exceptional was the 2015–2019 Central American Drought? Paper presented at the annual meeting of the American Association of Geographers, Denver, Colorado, March 23-27, 2023
- [25] ‡ Edwards, J., **K.J. Anchukaitis**, S. McAfee, A. Csank, L. Andreu-Hayles, R. D’Arrigo, G. von Arx, Records of past temperatures in wood anatomy of high-latitude trees, Paper presented at the annual meeting of the American Association of Geographers, Denver, Colorado, March 23-27, 2023
- [24] ‡ Harris, K., J.E. Tierney, S. Munoz, **K.J. Anchukaitis**, Late Holocene sea surface temperatures and monsoon rainfall variability in the Gulf of California, Paper presented at the annual meeting of the American Association of Geographers, Denver, Colorado, March 23-27, 2023
- [23] **Anchukaitis, K.J.**, B. Coulthard, N. Gauthier, G.T. Pederson, S.T. Gray, Reconstructed snowpack variability in the western United States over the last millennium, Paper presented at the annual meeting of the American Association of Geographers, Denver, Colorado, March 23-27, 2023
- [22] **Anchukaitis, K.J.**, Reconstructed snowpack variability in the western United States over the last millennium, The Glenn and Susan Buckley Lecture in Environmental Geology, University of Illinois Urbana-Champaign, February 9, 2023
- [21] Marshall, L., A. Schmidt, L. Luecke, L. Abraham, A.P. Schurer, R. Wilson, **K.J. Anchukaitis**, G.C. Hegerl, K.S. Carslaw, P. Forster, Last Millennium Volcanic Radiative Forcing and Climate Effects Simulated in an Interactive Aerosol-Climate Model, Abstract A15H-1334 presented at 2022 Fall Meeting, American Geophysical Union, Chicago, IL, December 12-17, 2022
- [20] Smerdon, J.E. and **K.J. Anchukaitis**, Progress and uncertainties in global and hemispheric temperature reconstructions of the Common Era, Abstract NG25A-08 presented at 2022 Fall Meeting, American Geophysical Union, Chicago, IL, December 12-17, 2022 (**Invited**)
- [19] ‡ Homfeld, I.K., B.L. Coulthard, R. Brice, L.A. Dye, G.L. Harley, K.J. Heeter, **K.J. Anchukaitis**, Freshet- and drought-season runoff reconstructions for the Fraser Basin Headwaters, British Columbia, Canada, Paper presented at AmeriDendro 2022, Montreal, Canada, June 27-30, 2022
- [18] Schneider, L., O. Konter, J. Esper, **K.J. Anchukaitis**, The pre-industrial temperature baseline for global warming from a tree-ring perspective, Tree-Rings in Archaeology, Climatology and Ecology (TRACE), May 24-27, Erlangen, Germany, 2022
- [17] † Leland, C. R.D. D’Arrigo, N. Davi, T. Porter, L. Andreu-Hayles, R. Oelkers, G. Wiles, R. Wilson, **K.J. Anchukaitis**, M.P. Rao, B. Gaglioti, E. Reid, S. Beaulieu, T. Nixon, The Unidentified 1809 Volcanic Event: Evidence from Tree Rings and Historical Data, Past Global Changes (PAGES) Open Science Meeting, OSM12: Volcanic impacts on climate and society, Agadir, Morocco, May 16-20, 2022
- [16] Zhu, F. J. Emile-Geay, **K.J. Anchukaitis**, G.J. Hakim, A.T. Wittenberg, M. Morales, M. Toohey, J. King, Do volcanoes influence ENSO? A re-appraisal with paleoclimate data assimilation, Past Global Changes (PAGES) Open Science Meeting, OSM12: Volcanic impacts on climate and society, Agadir, Morocco, May 16-20, 2022
- [15] ‡ Edwards, J.A., W. Tintor, **K.J. Anchukaitis**, C. Woodhouse, G. von Arx, Multiple climate signals in quantitative wood anatomical measurements of Rocky Mountain bristlecone pine, Paper presented (online) at the annual meeting of the American Association of Geographers, February 25-March 5, 2022

- [14] **Anchukaitis, K.J.**, B. Coulthard, N. Gauthier, G.T. Pederson, S.T. Gray, Reconstructed and simulated snowpack variability in the western United States over the last millennium, Abstract PP44A-01 presented at 2021 Fall Meeting, American Geophysical Union, New Orleans, LA, December 11-17, 2021
- [13] ‡ King, J.M., **K.J. Anchukaitis**, K.J. Allen, T. Vance, A. Hessler, Assimilating the Southern Annular Mode over the Common Era using Drought Atlases and a Global Proxy Network, Abstract PP54A-07 presented at 2021 Fall Meeting, American Geophysical Union, New Orleans, LA, December 11-17, 2021
- [12] ‡ Anderson, T.G., **K.J. Anchukaitis**, K. Morino, L. Andreu-Hayles, D. Pons, D. Griffin, E.J. Castellanos, M.J. Taylor, Multiproxy insights into past climate variability from a Central American tree-ring chronology network, Abstract GC55C-0448 presented at 2021 Fall Meeting, American Geophysical Union, New Orleans, LA, December 11-17, 2021
- [11] ‡ Harris, K., K. Flor, J.E. Tierney, **K.J. Anchukaitis**, High-Resolution Hydroclimate Reconstruction of the North American Monsoon over the Common Era, Abstract PP55C-0673 presented at 2021 Fall Meeting, American Geophysical Union, New Orleans, LA, December 11-17, 2021
- [10] ‡ Harris, K. J.E. Tierney, **K.J. Anchukaitis**, A. Arens, J.M. Cervenec, Virtual Field-Meets-Lab Experiences: Using VFEs to Showcase Organic Geochemistry and Paleoclimate Research, Abstract ED51A-08 presented at 2021 Fall Meeting, American Geophysical Union, New Orleans, LA, December 11-17, 2021
- [9] ‡ Edwards, J.A., **K.J. Anchukaitis**, B.E. Gunnarson, C. Pearson, K. Seftigen, G. von Arx, H.W. Linderholm, The origin of tree-ring reconstructed summer cooling in Northern Europe during the 18th century eruption of Laki, Abstract PP44A-04 presented at 2021 Fall Meeting, American Geophysical Union, New Orleans, LA, December 11-17, 2021
- [8] ‡ Marshall, L., A. Schmidt, A.P. Schurer, L. Abraham, R. Wilson, **K.J. Anchukaitis**, G.C. Hegerl, K.S. Carslaw, P. Forster, Last Millennium Volcanic Eruptions in the UK Earth System Model: Comparison to PMIP4 Reconstructions and Proxy Records, Abstract PP52A-07 presented at 2021 Fall Meeting, American Geophysical Union, New Orleans, LA, December 11-17, 2021
- [7] ‡ Reed, E., D.M. Thompson, **K.J. Anchukaitis**, Coral-based Sea Surface Salinity Reconstructions and the Role of Observational Uncertainties in Inferred Variability and Trends, Abstract PP43A-03 presented at 2021 Fall Meeting, American Geophysical Union, New Orleans, LA, December 11-17, 2021
- [6] ‡ Zhu, F. J. Emile-Geay, **K.J. Anchukaitis**, G.J. Hakim, A.T. Wittenberg, M. Morales, M. Toohey, J. King, Volcanoes and ENSO: a re-appraisal with the Last Millennium Reanalysis, EGU General Assembly 2021 (online), EGU21-753, April 19-30, 2021
- [5] ‡ Dye, L. B. Coulthard, J.S. Littell, **K.J. Anchukaitis**, When Two Records Are Better Than One: Reconstructing Warm and Dry Snow Droughts in the Cascade Mountains, USA, Paper presented (online) at the annual meeting of the American Association of Geographers, April 7-11, 2021
- [4] ‡ Edwards, J., **K.J. Anchukaitis**, B. Gunnarson, C. Pearson, G. von Arx, H. Linderholm, The enigmatic climate response to the 1783-1784 Laki eruption, Paper presented (online) at the annual meeting of the American Association of Geographers, April 7-11, 2021
- [3] **Anchukaitis, K.J.**, Temperature reconstructions from tree rings: state-of-the-art, challenges, and opportunities, Paper presented (online) at the annual meeting of the American Association of Geographers, April 7-11, 2021 (**Invited**)
- [2] ‡ Anderson, T.G., **K.J. Anchukaitis**, K. Morino, D. Pons, D. Griffin, C. Leland, E. Castellanos, M.J. Taylor, Regional and local climate responses in a Central American tree-ring chronology network, Paper presented (online) at the annual meeting of the American Association of Geographers, April 7-11, 2021

- [1] Brice, R., B. Coulthard, **K.J. Anchukaitis**, I. Homfeld, L. Dye, A new approach to streamflow reconstructions in complex, non-arid river basins: a case study for the Fraser River, B.C., Canada, Paper presented (online) at the annual meeting of the American Association of Geographers, April 7-11, 2021

SERVICE & SYNERGISTIC ACTIVITIES

University of Arizona, 2015–: College of Social and Behavioral Sciences Promotion and Tenure Committee (2021); School of Geography, Development, and Environment Promotion and Tenure Committees (2021, 2023, 2024); School of Geography, Development, and Environment Colloquium Committee (2017 – 2018; 2019 – 2021); Chair, Global Change Graduate Interdisciplinary Program (2017 – present); School of Geography, Development, and Environment Annual Performance Review Committee (2018 – 2021; 2024 – present; Chair in 2020–2021); School of Geography, Development, and Environment Committee for Diversity, Equity, and Inclusion (2019–2020); Graduate Admissions Committee, School of Geography and Development (2015 to 2018; 2023 – present); Earth System Genomics faculty search committee (2016); Integrated Land Use Science/Human-Environment Systems faculty search committee (2016–2017); Forests, Carbon & Climate faculty search committee (2017); Paleoclimatology Faculty Search committee (2017–2018); Data Science and Spatial Analysis Faculty Search committee (2019–2020); School of Geography, Development, and Environment Director Search committee (2023–2025).

Member, Committee on Functions and Criteria for a New Center for Paleoenvironmental Records of Extreme Events, National Academies of Sciences, Engineering, and Medicine, 2025 – present

Associate Editor, *Dendrochronologia*, 2023 – present

Organizer, co-PI, and instructor, paleoCAMP: Paleoclimate Training in Climate Archives, Models, and Proxies, 2022 – present

President-elect, The American Quaternary Association (AMQUA), 2022 – present

Editorial Advisory Board, Quaternary Science Reviews, 2008 – present.

Steering Group and co-founder, PAGES Working Group on Volcanic Impacts on Climate and Society 2015 – present.

Guest Instructor, ‘Climate Diplomacy’, School of Professional and Area Studies (SPAS), Foreign Service Institute (FSI), 2021 – 2023

Guest editor, special issue on ‘Interdisciplinary studies of volcanic impacts on climate and society’ for *Climate of the Past*, 2020 – 2024

Member, PAGES Asia2k (2011–2014), Ocean2k (2011 – 2015), North America 2k (2015 – present) Working Groups.

U.S. National Committee (USNC) for the International Union for Quaternary Research, National Academy of Sciences, 2018 – 2023

Program Committee chair, Conference of Latin American Geography (CLAG) meeting, Tucson, AZ, 2021 – 2023

Contributing Author, Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6), 2019 – 2021

Organizer and co-chair, ‘Climate of the Common Era’ for the American Geophysical Union Annual Meeting (AGU), 2010 – 2019; ‘Monsoon Effects on Past Civilizations’, 2012.

US Secretariat and Scientific Committee, 10th International Conference on Dendrochronology, Thimphu, Bhutan (2018)

University of Arizona Museum of Art panelist, ‘Fires of Change’ exhibit (2016).

Coordinator, PAGES2k Transregional Reconstruction Methods Development, 2014 – 2016.

Scientific Committee, 3rd American Dendrochronology Conference, Mendoza, Argentina, March 2016

Guest editor, *PAGES Magazine*, 2015.

Founder, organizer, and lead instructor, Central American Dendroecological Fieldweek, Chancol, Cuchumatanes, Guatemala, March 2015.

Fellow, Expert Witness Training Academy, NSF Paleoclimate Program and William Mitchell College of Law, St. Paul, Minnesota, August 2015.

Chair and co-organizer, PAGES Advances in Climate Field Reconstructions, April 15-16, 2014, Woods Hole, Massachusetts.

Scientific Advisory Committee, 9th International Conference on Dendrochronology, Melbourne, Australia, January 2014.

Contributing Author, Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5; 2013)

Instructor, North American Dendroecological Fieldweek, Black Rock Forest, New York, June-July 2013.

Arctic Research Consortium of the U.S. (ARCUS) PolarTREC Selection Committee, 2012–2013

International Workshop on Climate Informatics, Program Committee and Breakout Group Leader, 2012

Lamont-Doherty Earth Observatory, 2007–2012: Columbia Climate Center, 2011 - 2012; Promotion and Careers Committee, 2009 - 2012; Campus Life Committee, 2008 - 2010; Volunteer and Speaker, Annual Open House, 2007, 2008, Panelist on Climate Extremes, 2011.

Organizer and co-chair, ‘Advances in Paleoclimatology’ for the Annual Meetings of the Association of American Geographers, 2004 – 2009; ‘Challenges in Dendrochronology’, 2012.

Mentor, ‘Google Summer of Code’, Climate Code Foundation, Summer 2011.

Guest editor, *Dendrochronologia*, 2003 – 2004.

Professional reviewer of journal manuscripts for *Science*, *Nature*, *Nature Geoscience*, *Nature Climate Change*, *Science Advances*, *Proceedings of the US National Academy of Sciences*, *Journal of Climate*, *Geology*, *Journal of Geophysical Research*, *Geophysical Research Letters*, *Paleoceanography and Paleoclimatology*, *Climate Dynamics*, *Physical Geography*, *Geochimica et Cosmochimica Acta*, *Ecology*, *Earth and Planetary Science Letters*, *Global Change Biology*, *Climate of the Past*, *Quaternary Research*, *Climatic Change*, *The Holocene*, *Geochemistry*, *Geophysics*, *Geosystems*, *Tellus B*, *Chemical Geology*, *Canadian Journal of Forest Research*, *Forest Ecology and Management*, *International Journal of Biometeorology*, *Canadian Water Resources Journal*, *Journal of Volcanology*, *Earth Interactions*, *Historical Geography*, *Current Anthropology*, *Tree-Ring Research*, *Dendrochronologia*, and others.

Proposal reviewer for the National Science Foundation (NSF, USA), National Aeronautics and Space Administration (NASA, USA), Natural Environment Research Council (NERC, UK), Deutsche Forschungsgemeinschaft (the German Research Foundation, DFG), the Swiss National Science Foundation, Fonds de Recherche du Québec, NAS/USAID PEER, and the National Geographic Society.