

## 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

- ‡ Hwangbo, N., K.A. McKinnon, **K.J. Anchukaitis**, Simultaneous optimal target season estimation and local climate reconstruction using tree rings, *Geophysical Research Letters*, in revision, 2025
- ‡ Saunders, A., B. Tellman, E. Benami, **K.J. Anchukaitis**, S. Hossain, A. Bennett, A.K.M. Saiful Islam, J. Giezendanner, Sensitivity to Data Choice for Index-Based Flood Insurance, *Earth's Future*, in revision, 2025
- ‡ Anderson, T.G., D. Pons, Z. Guido, L. Tun, **K.J. Anchukaitis**, Usability of Seasonal Climate Forecasts in the Guatemalan Dry Corridor, *Weather, Climate, and Society*, in revision, 2025
- ‡ Verkerk, M., T.J. Aubry, C. Smith, P.O. Hopcroft, M. Sigl, J.E. Tierney, **K.J. Anchukaitis**, M. Osman, A. Schmidt, M. Toohey, Using reduced-complexity volcanic aerosol and climate models to produce large ensemble simulations of Holocene temperature, *Climate of the Past*, in revision, 2025
- Anchukaitis, K.J.**, J.O. Kaplan, B.I. Cook, D. Penny, Revisiting climate variability and the collapse of Greater Angkor, in press, 2025
- Allen, K., **K.J. Anchukaitis**, J. Palmer, M. Freund, N. English, R. Evans, A. Adriaanse-Tucker, J. King, E.R. Cook, B.M. Buckley, P. Krusic, P. Baker, Seasonal Common Era Temperature Reconstructions for Southeastern Australia, submitted, 2024
- Nguyen-Xuan Hau, M. Sano, T. Nakatsuka, **K.J. Anchukaitis**, Thanh Ngo-Duc, Ying-Shuo Chang, Shin-Hao Chen, Ssu-Hao Wang, Hsin-Lin Wei, Zhen Li, Le-Thi Thuong, Tran Binh Minh, I-Ching Chen, Upstream rainout processes govern tree-ring oxygen isotopes with implications for monsoon and tropical hydroclimate reconstruction, submitted, 2024

*Peer-Reviewed and Invited Papers* († = postdoctoral author, ‡ = student author)

- [145] ‡ 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, *Climatic Change*, accepted, 2025
- [144] Tierney, J.E., E.J. Judd, M.B. Osman, J.M. King, O.J. Truax, N. Steiger, D. Amrhein, **K.J. Anchukaitis**, Advances in paleoclimate data assimilation, *Annual Review of Earth and Planetary Sciences*, 53, 625-650, doi:10.1146/annurev-earth-032320-064209, 2025
- [143] ‡ Harris, K.D., J.E. Tierney, S. Munoz, **K.J. Anchukaitis**, Climate variability in the Gulf of California over the last 1300 years, *Paleoceanography and Paleoclimatology*, 40, 2, e2024PA004912, doi:10.1029/2024PA004912, 2025
- [142] † Leland, C., N. Davi, R. D'Arrigo, L. Andreu-Hayles, A. Pacheco-Solana, J. Edwards, **K.J. Anchukaitis**, T. Porter, M.F.J. Pisarcic, M. Mant, T. Galloway, and R. Oelkers, Tree-ring Evidence of the Elusive 1959 Summer Cold Event in Northwestern North America, *Arctic, Antarctic, and Alpine Research*, 57(1), doi:10.1080/15230430.2024.2445945, 2025
- [141] Marshall, L.R., A. Schmidt, A.P. Schurer, N.L. Abraham, L.J. Lucke, R. Wilson, **K.J. Anchukaitis**, G. Hegerl, B. Johnson, B.L. Otto-Bliesner, E.C. Brady, M. Khodri, K. Yoshida, Last Millennium volcanic forcing and climate response using SO<sub>2</sub> emissions, *Climate of the Past*, 21, 161-184, doi:10.5194/cp-21-161-2025, 2025
- [140] ‡ 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, *Paleoceanography and Paleoclimatology*, 40, 1, e2024PA005036, doi:10.1029/2024PA005036, 2025
- [139] ‡ Edwards, J., W.L. Tintor, A.F. Nolin, C.A. Woodhouse G. von Arx, **K.J. Anchukaitis**, Multiple elevation-dependent climate signals from quantitative wood anatomical measurements of Rocky Mountain bristlecone pine, *Journal of Geophysical Research – Biogeosciences*, 130, 1, e2024JG008307, doi: 10.1029/2024JG008307, 2025

- [138] 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, *Journal of Geophysical Research – Atmospheres*, 129, 12, e2023JD040537, doi:10.1029/2023JD040537, 2024
- [137] 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, *Journal of Climate*, 37, 17, 4389–4401, doi:10.1175/JCLI-D-23-0773.1, 2024
- [136] Esper, J. J.E. Smerdon, **K.J. Anchukaitis**, K. Allen, E.R. Cook, R. D’Arrigo, S. Guillet, F.C. Ljungqvist, F. Reinig, L. Schneider, M. Sigl, M. Stoffel, M. Trnka, R. Wilson, U. Buntgen, The IPCC’s reductive Common Era temperature history, *Nature Communications Earth & Environment*, 5, 222, doi:10.1038/s43247-024-01371-1, 2024
- [135] **Anchukaitis, K.J.**, R. Touchan, D.M. Meko, D. Kherchouche, S. Slimani, F. Sivrikaya, R. Ilmen, I. Mitsopoulos, J. Stephan, J. Attieh, F. Hasnaoui, J.J. Camarero, R. Sánchez-Salguero, F. Guibal, A. Piermattei, A. Christou, J. Krcmaric, B.I. Cook, Enhancing spatiotemporal reconstructions of hydroclimate variability across the Mediterranean during the last millennium, *Climate Dynamics*, 62, 5351–5371, doi:10.1007/s00382-024-07166-6, 2024
- [134] † 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, *Science Advances*, 10, 4, doi:10.1126/sciadv.adj42, 2023
- [133] Williams, A.P., **K.J. Anchukaitis**, A.M. Varuolo-Clarke, Atmospheric rivers are responsible for cyclicity in Sierra Nevada precipitation, *Journal of Climate*, 37, 5, 1613–1627, doi:10.1175/JCLI-D-23-0421.1, 2023
- [132] Herrera, D.A., B.I. Cook, J. Fasullo, **K.J. Anchukaitis**, M.J. Alessi, C.J. Martinez, C.P. Evans, X. Li, K.N. Ellis, R. Mendez-Tejeda, T.R. Ault, A. Centella-Artola, T.S. Stephenson, M.A. Taylor, Observed changes in hydroclimate attributed to human forcing, *PLOS Climate*, 2(11): e0000303, doi:10.1371/journal.pclm.0000303, 2023
- [131] ‡ Anderson, T.G., K. McKinnon, D. Pons, **K.J. Anchukaitis**, How exceptional was the 2015–2019 Central American Drought? *Geophysical Research Letters*, 50, 21, e2023GL105391, doi: 10.1029/2023GL105391, 2023
- [130] Burke, A., H. Innes, L. Crick, **K.J. Anchukaitis**, M. Byrne, W. Hutchison, J. McConnell, K. Moore, J. Rae, M. Sigl, and R. Wilson, High sensitivity of summer temperatures to stratospheric sulfur loading from volcanoes in the Northern Hemisphere, *Proceedings of the National Academy of Sciences*, 120, 47, e2221810120, doi:10.1073/pnas.2221810120, 2023
- [129] ‡ King, J., J.E. Tierney, M. Osman, E. Judd, **K.J. Anchukaitis**, DASH: A MATLAB Toolbox for Paleoclimate Data Assimilation, *Geoscientific Model Development*, 16, 5653–5683, doi:10.5194/gmd-16-5653-2023, 2023
- [128] Zhu, F., J. Emile-Geay, **K.J. Anchukaitis**, N. McKay, S. Stevenson, Z. Meng, A pseudoproxy emulation of the PAGES 2k database using a hierarchy of proxy system models, *Scientific Data*, 10, 624, doi: 10.1038/s41597-023-02489-1, 2023
- [127] Schneider, L., O. Konter, J. Esper, **K.J. Anchukaitis**, Constraining the 19th century temperature baseline for global warming, *Journal of Climate*, 36, 18, 6261–6272, doi:10.1175/JCLI-D-22-0806.1, 2023
- [126] ‡ Dye, L.A., B.L. Coulthard, B. Hatchett, I.K. Homfeld, T.N. Salazar, J.S. Littell, **K.J. Anchukaitis**, The severity of the 2014–2015 snow drought in the Oregon Cascades in a multicentury context, *Water Resources Research*, 59, 5, doi:10.1029/2022WR032875, 2023
- [125] ‡ King, J., **K.J. Anchukaitis**, K. Allen, T. Vance, A. Hessler, Trends and variability in the Southern Annular Mode during the Common Era, *Nature Communications*, 14, 2324, doi:10.1038/s41467-023-37643-1, 2023
- [124] † Leland, C., R. D’Arrigo, N. Davi, **K.J. Anchukaitis**, L. Andreu-Hayles, T.J. Porter, T. Galloway, M. Mant, G. Wiles, R. Wilson, S. Beaulieu, R. Oelkers, B. Gaglioti, M.P.

- Rao, E. Reid, T. Nixon, A Spatiotemporal Assessment of Extreme Cold in Northwestern North America Following the Unidentified 1809 CE Volcanic Eruption, *Paleoceanography and Paleoclimatology*, 38, 5, [doi:10.1029/2022PA004581](https://doi.org/10.1029/2022PA004581), 2023
- [123] ‡ Heeter, K., G. Harley, J. Abatzoglou, **K.J. Anchukaitis**, E.R. Cook, B.L. Coulthard, L.A. Dye, and I.K. Homfled, Unprecedented 21st century heat across the Pacific Northwest of North America, *npj Climate and Atmospheric Science*, 6, 5, [doi:10.1038/s41612-023-00340-3](https://doi.org/10.1038/s41612-023-00340-3), 2023
- [122] ‡ Walker, M., A. Mueller, K. Allen, P. Fenwick, V. Agrawal, **K.J. Anchukaitis**, A. Hessler, High Resolution Radiocarbon Spike Confirms Tree Ring Dating with Low Sample Depth, *Dendrochronologia*, 77, 126048, [doi:10.1016/j.dendro.2022.126048](https://doi.org/10.1016/j.dendro.2022.126048), 2022
- [121] † Leland, C., L. Andreu-Hayles, E.R. Cook, **K.J. Anchukaitis**, O. Byambasuren, N. Davi, A. Hessler, D. Martin-Benito, B. Nachin, N. Pederson, Impacts of Climate and Tree Morphology on Tree-ring Stable Isotopes in Central Mongolia, *Tree Physiology*, 43, 4, 539–555, [doi:10.1093/treephys/tpac142](https://doi.org/10.1093/treephys/tpac142), 2022
- [120] Cook, B.I. J.E. Smerdon, E.R. Cook, A.P. Williams, **K.J. Anchukaitis**, J.S. Mankin, K. Allen, L. Andreu-Hayles, T.R. Ault, S. Belmecheri, S. Coats, B. Coulthard, B. Fosu, P. Grierson, D. Griffin, D. Herrera, M. Ionita, F. Lehner, C. Leland, K.D. Marvel, M. Morales, V. Mishra, J. Ngoma, H. Nguyen, A. O'Donnell, J. Palmer, M.P. Rao, M. Rodriguez, D. Stahle, S. Stevenson, U.K. Thapa, A. Varuolo-Clarke, E. Wise, Megadroughts in the Common Era and the Anthropocene, *Nature Reviews Earth and Environment*, 3, 741–757, [doi:10.1038/s43017-022-00329-1](https://doi.org/10.1038/s43017-022-00329-1), 2022
- [119] ‡ Grzywacz, Z., A. Hessler, **K.J. Anchukaitis**, S. Sharma, M.N. Evans, S. Nichols, Investigating the potential for Southern Hemisphere climate reconstruction using stable isotopes in Tasmanian tree rings, *Dendrochronologia*, 76, 126016, [doi:10.1016/j.dendro.2022.126016](https://doi.org/10.1016/j.dendro.2022.126016), 2022
- [118] Degroot, D., **K.J. Anchukaitis**, J.E. Tierney, F. Riede, A. Manica, E. Moesswilde, N. Gauthier, The History of Climate and Society: A Review of the Influence of Climate Change on the Human Past, *Environmental Research Letters*, 17, 10, 103001, [doi:10.1088/1748-9326/ac8faa](https://doi.org/10.1088/1748-9326/ac8faa), 2022
- [117] **Anchukaitis, K.J.** and J.E. Smerdon, Progress and uncertainties in global and hemispheric temperature reconstructions of the Common Era, *Quaternary Science Reviews*, 286, 107537, [doi:10.1016/j.quascirev.2022.107537](https://doi.org/10.1016/j.quascirev.2022.107537), 2022
- [116] ‡ Reed, E.V, D.M Thompson, **K.J. Anchukaitis**, Coral-based Sea Surface Salinity Reconstructions and the Role of Observational Uncertainties in Inferred Variability and Trends, *Paleoceanography and Paleoclimatology*, 37, 6, [doi:10.1029/2021PA004371](https://doi.org/10.1029/2021PA004371), 2022
- [115] ‡ Trinies, C.A. A.G. Bunn, C. Robertson, **K.J. Anchukaitis**, Dendroclimatology of yellow-cedar (*Callitropsis nootkatensis*) and temperature variability on the western slopes of the North Cascades in Washington State, USA from 1333 to 2015 CE, *Tree-Ring Research*, 78(2):113-128, [doi:10.3959/2021-20](https://doi.org/10.3959/2021-20), 2022
- [114] Mackay, H., G. Plunkett, B. Jensen, T. Aubry, C. Corona, W.M. Kim, M. Toohey, M. Sigl, M. Stoffel, **K.J. Anchukaitis**, C. Raible, M. Bolton, J. Manning, T. Newfield, N. Di Cosmo, F. Ludlow, C. Kostick, Z. Yang, L. Coyle McClung, M. Amesbury, A. Monteath, P. Hughes, P. Langdon, D. Charman, R. Booth, K. Davies, A. Blundell, G. and Swindles, The 852/3 CE Mount Churchill eruption: examining the potential climatic and societal impacts and the timing of the Medieval Climate Anomaly in the North Atlantic Region, *Climate of the Past*, 18, 6, 1475–1508, [doi:10.5194/cp-18-1475-2022](https://doi.org/10.5194/cp-18-1475-2022), 2022
- [113] ‡ Zhu, F., J. Emile-Geay, **K.J. Anchukaitis**, G.J. Hakim, A. Wittenberg, M. Morales, M. Toohey, J. King, A re-appraisal of the ENSO response to volcanism with paleoclimate data assimilation, *Nature Communications*, 13, 747, [doi:10.1038/s41467-022-28210-1](https://doi.org/10.1038/s41467-022-28210-1), 2022
- [112] ‡ Edwards, J., **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, *Paleoceanography and Paleoclimatology*, 37, 2, e2021PA004386, [doi:10.1029/2021PA004386](https://doi.org/10.1029/2021PA004386), 2022

- [111] † Gauthier, N., B.L. Coulthard, **K.J. Anchukaitis**, Pattern-based downscaling of snowpack variability in the western United States, *Climate Dynamics*, 58, 3225–3241, [doi:10.1007/s00382-021-06094-z](https://doi.org/10.1007/s00382-021-06094-z), 2022
- [110] Brice, R., B.L. Coulthard, I.K. Homfeld, L.A. Dye, **K.J. Anchukaitis**, Paleohydrological context for recent floods and droughts in the Fraser River basin, *Environmental Research Letters*, 16, 124074, [doi:10.1088/1748-9326/ac3daf](https://doi.org/10.1088/1748-9326/ac3daf), 2021
- [109] Shishov, V., I. Tychkov, **K.J. Anchukaitis**, G.K. Zelenov, E.A. Vaganov, A band model of cambium development: opportunities and prospects, *Forests*, 12(10):1361, [doi:10.3390/f12101361](https://doi.org/10.3390/f12101361), 2021
- [108] ‡ Windler, G., J.E. Tierney, **K.J. Anchukaitis**, Glacial-interglacial shifts dominate tropical Indo-Pacific hydroclimate during the late Pleistocene, *Geophysical Research Letters*, 48, 15, e2021GL093339, [doi:10.1029/2021GL093339](https://doi.org/10.1029/2021GL093339), 2021
- [107] ‡ Anderson, T.G., D.A. Christie, R.O. Chávez, M. Olea, **K.J. Anchukaitis**, Spatiotemporal peatland productivity and climate relationships across the western South American Altiplano, *Journal of Geophysical Research - Biogeosciences*, 126, 6, e2020JG005994, [doi:10.1029/2020JG005994](https://doi.org/10.1029/2020JG005994), 2021
- [106] ‡ King, J.M., **K.J. Anchukaitis**, J.E. Tierney, G.J. Hakim, J. Emile-Geay, F. Zhu, R. Wilson, A data assimilation approach to last millennium temperature field reconstruction using a limited high-sensitivity proxy network, *Journal of Climate*, 34(17): 7091–7111, [doi:10.1175/JCLI-D-20-0661.1](https://doi.org/10.1175/JCLI-D-20-0661.1), 2021.
- [105] Buntgen, U., K. Allen, **K.J. Anchukaitis**, D. Arseneault, E. Boucher, A. Brauning, S. Chatterjee, P. Cherubini, O.V. Churakova, C. Corona, F. Gennaretti, J. Gießinger, S. Guillet, J. Guiot, B. Gunnarson, S. Helama, P. Hochreuther, M.K. Hughes, P. Huybers, A.V. Kirdyanov, P.J. Krusic, J. Ludescher, W. J.-H. Meier, V.S. Myglan, K. Nicolussi, C. Oppenheimer, F. Reinig, M.W. Salzer, K. Seftigen, A.R. Stine, M. Stoffel, S. St. George, E. Tejedor, A. Trevino, V. Trouet, J. Wang, R. Wilson, B. Yang, G. Xu, J. Esper, The influence of decision-making in tree ring-based climate reconstructions, *Nature Communications*, 12, 3411, [doi:10.1038/s41467-021-23627-6](https://doi.org/10.1038/s41467-021-23627-6), 2021
- [104] Degroot, D., **K.J. Anchukaitis**, M. Bauch, J. Burnham, F. Carnegy, J. Cui, K. de Luna, P. Guzowski, G. Hambrecht, H. Huhtamaa, A. Izdebski, K. Kleemann, E. Moesswilde, T. Newfield, Q. Pei, E. Xoplaki, N. Zappia. Towards a Rigorous Understanding of Societal Responses to Climate Change, *Nature*, 591, 539–550, [doi:10.1038/s41586-021-03190-2](https://doi.org/10.1038/s41586-021-03190-2), 2021
- [103] Coulthard, B.L., **K.J. Anchukaitis**, G.T. Pederson, E.R. Cook, J. Littell, D. Smith, Snowpack signals in North American tree rings, *Environmental Research Letters*, 16, 034037, [doi:10.1088/1748-9326/abd5de](https://doi.org/10.1088/1748-9326/abd5de), 2021
- [102] Williams, A.P., **K.J. Anchukaitis**, C. A. Woodhouse, D. M. Meko, B. I. Cook, K. Bolles, E. R. Cook, Tree rings suggest no stable cycles in Sierra Nevada cool-season precipitation, *Water Resources Research*, 57(3), e2020WR028599, [doi: 0.1029/2020WR028599](https://doi.org/10.1029/2020WR028599), 2021
- [101] ‡ Edwards, J., **K.J. Anchukaitis**, B. Zambri, L. Andreu-Hayles, R. Oelkers, R. D’Arrigo, G. von Arx, Intra-annual climate anomalies in northwestern North America following the 1783–1784 CE Laki eruption, *Journal of Geophysical Research*, 126, e2020JD033544, [doi:10.1029/2020JD033544](https://doi.org/10.1029/2020JD033544), 2021
- [100] ‡ McPartland, M.Y., S. St. George, G.T. Pederson, **K.J. Anchukaitis**, Does signal-free detrending increase chronology coherence in large tree-ring networks? *Dendrochronologia*, 63, 125755, [doi:10.1016/j.dendro.2020.125755](https://doi.org/10.1016/j.dendro.2020.125755), 2020
- [99] ‡ Murphy, P.C., J.F. Knowles, D.J.P. Moore, **K.J. Anchukaitis**, D.L. Potts, G.A. Barron-Gafford, Topography influences species-specific patterns of seasonal primary productivity in a semiarid montane forest, *Tree Physiology*, 40(10), 1343–1354, [doi:10.1093/treephys/tpaa083](https://doi.org/10.1093/treephys/tpaa083), 2020



- [98] Cook, B.I., J. S. Mankin, K. Marvel, A. P. Williams, J. E. Smerdon, **K.J. Anchukaitis**, Twenty-first Century Drought Projections in the CMIP6 Forcing Scenarios, *Earth's Future*, 8, 6, doi:10.1029/2019EF001461, 2020
- [97] Andreu-Hayles, L., B.V. Gaglioti, L.T. Berner, M. Levesque, **K.J. Anchukaitis**, S. Goetz, R. D'Arrigo, A narrow window of summer temperatures is associated with shrub growth in Arctic Alaska, *Environmental Research Letters*, 15, 10, 105012, doi:10.1088/1748-9326/ab897f, 2020
- [96] † Martin, J.T., G.T. Pederson, C.A. Woodhouse, E.R. Cook, G.J. McCabe, **K.J. Anchukaitis**, E.K. Wise, P.J. Erger, L.S. Dolan, M. McGuire, S. Gangopadhyay, K.J. Chase, J.S. Littell, S.T. Gray, S. St. George, J.M. Friedman, D.J. Sauchyn, J. St. Jacques, and J.C. King, Increased drought severity tracks warming in the United States' largest river basin, *Proceedings of the National Academy of Sciences*, 117 (21) 11328–11336, doi: 10.1073/pnas.1916208117, 2020.
- [95] ‡ Zhu, F., J. Emile-Geay, G.J. Hakim, J. King, **K.J. Anchukaitis**, Resolving the differences in the simulated and reconstructed climate response to volcanism over the last millennium, *Geophysical Research Letters*, 47, 8, doi:10.1029/2019gl086908, 2020
- [94] Pederson, N., C. Leland, D.A. Bishop, J.K. Pearl, **K.J. Anchukaitis**, T. Mandra, M. Hopton-Ahmed, D. Martin-Benito, A framework for determining population-level vulnerability to climate: evidence for growth hysteresis in *Chamaecyparis thyoides* along its contiguous latitudinal distribution, *Frontiers in Forests and Global Change*, 3, 39, doi:10.3389/ffgc.2020.00039, 2020.
- [93] **Anchukaitis, K.J.**, M.N. Evans, M. K. Hughes, and E. Vaganov, An interpreted language implementation of the Vaganov-Shashkin tree-ring proxy system model, *Dendrochronologia*, 60, 125677, doi:10.1016/j.dendro.2020.125677, 2020
- [92] ‡ Pearl, J.K., **K.J. Anchukaitis**, N. Pederson, J. Donnelly, Multivariate climate field reconstructions using tree rings for the northeastern United States, *Journal of Geophysical Research*, 125, 1, e2019JD031619, doi:10.1029/2019JD031619, 2020.
- [91] ‡ Pearl, J.K., **K.J. Anchukaitis**, J. Donnelly, C. Pearson, N. Pederson, M.C. Lardie Gaylord, A.P. McNichol, E.R. Cook, G.L. Zimmermann, A late Holocene subfossil Atlantic white cedar tree-ring chronology from the northeastern United States, *Quaternary Science Reviews*, 228, 106104, doi:10.1016/j.quascirev.2019.106104, 2020.
- [90] ‡ Anderson, T.G., **K.J. Anchukaitis**, D. Pons, M.J. Taylor, Multiscale trends and precipitation extremes in the Central American Midsummer Drought, *Environmental Research Letters*, 14, 124016, doi:10.1088/1748-9326/ab5023, 2019
- [89] **Anchukaitis, K.J.**, Cook, E.R., Cook, B.I., J.K. Pearl, R.D. D'Arrigo, R. Wilson, Coupled Modes of North Atlantic Ocean-Atmosphere Variability and the Onset of the Little Ice Age, *Geophysical Research Letters*, 46, 21, 12417–12426, doi:10.1029/2019GL084350, 2019
- [88] Dull, R.A., J.R. Southon, S. Kutterolf, **K.J. Anchukaitis**, A. Freundt, D.B. Wahl, P. Sheets, P. Amaroli, W. Hernandez, M.C. Wiemann, C. Oppenheimer, Radiocarbon and geologic evidence reveal Ilopango volcano as source of the colossal 'mystery' eruption of 539/40 CE, *Quaternary Science Reviews*, 222, 105855, doi:10.1016/j.quascirev.2019.07.037, 2019
- [87] Wilson, R., **K.J. Anchukaitis**, L. Andreu Hayles, E. Cook, R.D. D'Arrigo, N. Davi, L. Haberbauer, P. Krusic, B. Luckman, D. Morimoto, R. Oelkers, G. Wiles, C. Wood, Improved dendroclimatic calibration using Blue Intensity for white spruce in the southern Yukon, *The Holocene*, 29, 11, doi:10.1177/0959683619862037, 2019
- [86] Alexander, M.R., J.K. Pearl, D.A. Bishop, E.R. Cook, **K.J. Anchukaitis**, N. Pederson, The potential to strengthen temperature reconstructions in eco-regions with limited tree line using a multi-species approach, *Quaternary Research*, 92, 2, 583–597, doi:10.1017/qua.2019.33, 2019
- [85] ‡ Rao, M.P., E.R. Cook, B.I. Cook, **K.J. Anchukaitis**, R.D. D'Arrigo, P.J. Krusic, A.N. LeGrande, A double bootstrap approach to Superposed Epoch Analysis to evaluate response uncertainty, *Dendrochronologia*, 55, 119–124, doi:10.1016/j.dendro.2019.05.001, 2019

- [84] Cook, E.R., Y. Kushnir, J.E. Smerdon, A.P. Williams, **K.J. Anchukaitis**, E. Wahl, A Euro-Mediterranean Tree-Ring Reconstruction of the Winter NAO Index Since 910 CE, *Climate Dynamics*, 53(3-4), 1567-1580, doi:10.1007/s00382-019-04696-2, 2019.
- [83] Allen K.J., **K.J. Anchukaitis**, M.G. Grose, G. Lee, E.R. Cook, S. Larsen, A. O'Grady, J.S. Risbey, T.J. O'Kane, D. Monselesan, P.J. Baker, Reconstructions of cool season temperature for far southeastern Australia, *Climate Dynamics*, 53(1-2), 569-583, doi:10.1007/s00382-018-04602-2, 2019
- [82] Andreu-Hayles, L., M. Levesque, D. Martin-Benito, R. Harris, W. Huang, C. Leland, R. Oelkers, J. Martin-Fernández, **K.J. Anchukaitis**, G. Helle, A high yield cellulose extraction system for small whole wood samples and dual measurement of carbon and oxygen stable isotopes, *Chemical Geology*, 504, 53-65, doi:10.1016/j.chemgeo.2018.09.007, 2019.
- [81] Bunn, A.G., M.W. Salzer, **K.J. Anchukaitis**, J.M. Bruening, and M.K. Hughes, Spatiotemporal variability in the climate growth response of high elevation bristlecone pine in the White Mountains of California, *Geophysical Research Letters*, 45(24): 13312-13321, doi:10.1029/2018gl080981, 2018
- [80] Esper, J., S. St. George, **K.J. Anchukaitis**, R. D'Arrigo, F. Ljungqvist, J. Luterbacher, L. Schneider, M. Stoffel, R. Wilson, U. Buntgen, Large-scale, millennial-length temperature reconstructions from tree-rings, *Dendrochronologia*, 50, 81-90, doi:10.1016/j.dendro.2018.06.001, 2018.
- [79] Cook, B.I., J.S. Mankin, **K.J. Anchukaitis**, Climate Change and Drought: From Past to Future, *Current Climate Change Reports*, 4(2):164-179, doi:10.1007/s40641-018-0093-2, 2018
- [78] Karnauskas, K.B. C-F Schleussner, J.P. Donnelly, **K.J. Anchukaitis**, Freshwater Stress on Small Island Developing States: Population Projections and Aridity Changes at 1.5°C and 2°C, *Regional Environmental Change*, 18(8), 2273-2282, doi:10.1007/s10113-018-1331-9, 2018
- [77] ‡ Anderson, T., D. Griffin, **K.J. Anchukaitis**, D. Pons, M.J. Taylor, Climate Sensitivity and Potential Vulnerability of Guatemalan Fir (*Abies guatemalensis*) Forests in Totonicapán, Guatemala, *Journal of Latin American Geography*, 17(1), 222-247, doi:10.1353/lag.2018.0009, 2018.
- [76] Hessler, A.E., **K.J. Anchukaitis**, C. Jelsema, B.I. Cook, O. Byambasuran, C. Leland, B. Naching, N. Pederson, H. Tian, L Andreu-Hayles, Past and Future Drought in Mongolia, *Science Advances*, 4(3), e1701832, doi:10.1126/sciadv.1701832, 2018.
- [75] ‡ Leland, C., E.R. Cook, L. Andreu-Hayles, N Pederson, A. Hessler, **K.J. Anchukaitis**, O. Byambasuren, B. Nachin, N Davi, R.D. D'Arrigo, K. Griffin, D.A. Bishop, M.P. Rao, Strip-bark morphology and radial growth trends in ancient *Pinus sibirica* trees from central Mongolia, *Journal of Geophysical Research - Biogeosciences*, 123, 945-959, doi:10.1002/2017JG004196, 2018.
- [74] **Anchukaitis, K.J.**, Tree rings reveal climate change past, present, and future, *Proceedings of the American Philosophical Society*, 161, 3, 244-263, 2017
- [73] ‡ Pearl, J.K., **K.J. Anchukaitis**, N. Pederson, J. Donnelly, Reconstructing Northeastern United States temperatures using Atlantic white cedar tree rings, *Environmental Research Letters*, 2(11), 114012, doi:10.1088/1748-9326/aa8f1b, 2017.
- [72] PAGES2k Hydro2k Consortium (Smerdon, J.E., J. Luterbacher, S. Phipps, **K.J. Anchukaitis et al.**), Comparing proxy and model estimates of hydroclimate variability and change over the Common Era, *Climate of the Past*, 13, 1851-1900, doi:10.5194/cp-13-1851-2017, 2017.
- [71] † Martin-Benito, D., **K.J. Anchukaitis**, M.N. Evans, M. del Río, H. Beeckman, I. Cañellas, Effects of drought on xylem anatomy and water use efficiency of two co-occurring pine species, *Forests*, 8(9), 332, doi:10.3390/f8090332, 2017.
- [70] PAGES2k Consortium (Emile-Geay, J., N. McKay, D. Kaufman, L. von Gunten, J. Wang, **K.J. Anchukaitis, et al.**), A global multiproxy database for temperature reconstructions of the Common Era, *Nature Scientific Data*, 4, 170088, doi:10.1038/sdata.2017.88, 2017.

- [69] † Coulthard, B., R. Touchan, **K.J. Anchukaitis**, D.M. Meko, F. Sivrikakaya, Tree growth and vegetation activity at the ecosystem-scale in the eastern Mediterranean, *Environmental Research Letters*, 12, 084008, doi:10.1088/1748-9326/aa7b26, 2017.
- [68] Wilson, R., R.D. D’Arrigo, L. Andreu-Hayles, R. Oelkers, G. Wiles, **K.J. Anchukaitis**, and N. Davi, Experiments based on blue intensity for reconstructing North Pacific temperatures along the Gulf of Alaska, *Climate of the Past*, 13, 1007–1022, doi:10.5194/cp-13-1007-2017, 2017.
- [67] Quade, J., E.T. Rasbury, K. Huntington, A.M. Hudson, H. Vonhof, **K.J. Anchukaitis**, J. Betancourt, C. Latorre, M. Pepper, Isotopic Characterization of late Neogene travertine deposits at Barrancas Blancas in the eastern Atacama Desert, Chile, *Chemical Geology*, 466, 41–56, doi:10.1016/j.chemgeo.2017.05.004, 2017.
- [66] ‡ Rao, M.P., B.I. Cook, E.R. Cook, R.D. D’Arrigo, P.J. Krusic, **K.J. Anchukaitis**, A. LeGrande, B.M. Buckley, N.K. Davi, C. Leland, K. L. Griffin, European and Mediterranean hydroclimate responses to tropical volcanic forcing over the past millennium, *Geophysical Research Letters*, doi:10.1002/2017GL073057, 2017.
- [65] **Anchukaitis, K.J.**, R. Wilson, K. Briffa, U. Büntgen, E.R. Cook, R.D. D’Arrigo, N. Davi, J. Esper, D. Frank, B. Gunnarson, G. Hegerl, S. Helama, S. Klesse, P.J. Krusic, H. Linderholm, V. Myglan, T. J. Osborn, Z. Peng, M. Rydval, L. Schneider, A. Schurer, G. Wiles and E. Zorita, Last millennium northern hemisphere summer temperatures from tree rings: Part II, spatially resolved reconstructions, *Quaternary Science Reviews*, 163, 1–22, doi:10.1016/j.quascirev.2017.02.020, 2017.
- [64] Touchan, R., **K.J. Anchukaitis**, D. Meko, D. Kerchouche, S. Slimani, R. Ilmen, F. Hasnaoui, F. Guibal, J.J. Camarero, R. Sánchez-Salguero, A. Piermattei, A. Sesbou, B.I. Cook, M. Sabir, H. Touchane, Climate controls on tree growth in the Western Mediterranean, *The Holocene*, 27, 10, 1429–1442, doi:10.1177/0959683617693901, 2017.
- [63] ‡ Pons, D., M. J. Taylor, R.D. Griffin, E. Castellanos, **K.J. Anchukaitis**, On the production of climate information in the high mountain forests of Guatemala, *Annals of the Association of American Geographers*, 107, 323–335, doi: 10.1080/24694452.2016.1235481, 2017.
- [62] † Coats, S., J.E. Smerdon, B.I. Cook, R. Seager, E.R. Cook, **K.J. Anchukaitis**, Internal ocean-atmosphere variability drives megadroughts in Western North America, *Geophysical Research Letters*, 43, 9886–9894, doi:10.1002/2016GL0701052016, 2016.
- [61] Karnauskas, K.B., J.P. Donnelly, and **K.J. Anchukaitis**, Future Freshwater Stress for Island Populations, *Nature Climate Change*, 6, 720–725, doi:10.1038/nclimate2987, 2016.
- [60] ‡ Fleming, L.E. and **K.J. Anchukaitis**, North Pacific decadal variability in the CMIP5 last millennium simulations, *Climate Dynamics*, 47, 3783–3801, doi:10.1007/s00382-016-3041-7, 2016.
- [59] Cook, B.I., **K.J. Anchukaitis**, R. Touchan, D.M. Meko, and E.R. Cook, Spatiotemporal drought variability in the Mediterranean over the last 900 years, *Journal of Geophysical Research*, 121, 2060–2074, doi:10.1002/2015JD023929, 2016.
- [58] Wilson, R., **K.J. Anchukaitis**, K. Briffa, U. Büntgen, E.R. Cook, R.D. D’Arrigo, N. Davi, J. Esper, D. Frank, B. Gunnarson, G. Hegerl, S. Klesse, P.J. Krusic, H. Linderholm, V. Myglan, Z. Peng, M. Rydval, L. Schneider, A. Schurer, G. Wiles and E. Zorita, Last millennium Northern hemisphere summer temperatures from tree rings: Part I: the long term context, *Quaternary Science Reviews*, 134, 1-18, doi:10.1016/j.quascirev.2015.12.005, 2016.
- [57] ‡ Rydval, M., D. Druckenbrod, **K.J. Anchukaitis**, R. Wilson, Detection and removal of disturbance trends in tree-ring series for dendroclimatology, *Canadian Journal of Forest Research*, 46(3), 387-401, doi:10.1139/cjfr-2015-0366, 2016.
- [56] LeGrande, A. and **K.J. Anchukaitis**, Volcanic eruptions and climate, *Past Global Changes Magazine*, 23(2), 46-47, 2015.



- [55] St. George, S. and **K.J. Anchukaitis**, On the A.D. 1815 Tambora eruption and the matter of misplaced tree rings, *Past Global Changes Magazine*, 23(2): 46-47, 2015.
- [54] ‡ Hernandez, M., C. C. Ummenhofer, and **K.J. Anchukaitis**, Multi-scale drought and ocean-atmosphere variability in monsoon Asia, *Environmental Research Letters*, 10, 0740102015, doi: [10.1088/1748-9326/10/7/074010](https://doi.org/10.1088/1748-9326/10/7/074010), 2015.
- [53] Davi, N., R. D’Arrigo, G.C. Jacoby, E.R. Cook, **K.J. Anchukaitis**, B. Nachin, M.P. Rao, and C. Leland, A long-term context (931–2005 C.E.) for rapid warming over central Asia, *Quaternary Science Reviews*, 14(1), 89–97, doi:[10.1016/j.quascirev.2015.05.020](https://doi.org/10.1016/j.quascirev.2015.05.020), 2015.
- [52] Wiles, G.C., O. Solomina, R.D. D’Arrigo, **K.J. Anchukaitis**, Y. V. Gensiarovsky, N. Wiesenberg, Reconstructed summer temperatures over the last 400 years based on Larch ring widths: Sakhalin Island, Russian Far East, *Climate Dynamics*, 45(1-2), 397–405, doi:[10.1007/s00382-014-2209-2](https://doi.org/10.1007/s00382-014-2209-2), 2015.
- [51] Tierney, J.E., N.J. Abram, **K.J. Anchukaitis**, M.N. Evans, C. Giry, H. Kilbourne, C.P. Saenger, H. Wu, J. Zinke, Tropical sea-surface temperatures for the past four centuries reconstructed from coral archives, *Paleoceanography*, 30(3), 226–252, doi:[10.1002/2014PA002717](https://doi.org/10.1002/2014PA002717), 2015.
- [50] D’Arrigo, R.D., R. Wilson, G. Wiles, **K.J. Anchukaitis**, O. Solomina, N. Davi, C. Deser, V. Matskovsky, E. Dolgova, Tree-ring reconstructed temperature index for coastal northern Japan: implications for western North Pacific variability, *International Journal of Climatology*, 35, 3713–3720, doi:[10.1002/joc.4230](https://doi.org/10.1002/joc.4230), 2015.
- [49] † Griffin, D. and **K.J. Anchukaitis**, How unusual is the 2012-2014 California drought? *Geophysical Research Letters*, 41(24): 9017–9023, doi:[10.1002/2014GL062433](https://doi.org/10.1002/2014GL062433), 2014.
- [48] **Anchukaitis, K.J.**, M. J. Taylor, C. Leland, D. Pons, J. Martin-Fernandez, E. Castellanos, Tree-ring reconstructed dry season rainfall in Guatemala, *Climate Dynamics*, 45(5), 1537–1546, doi:[10.1007/s00382-014-2407-y](https://doi.org/10.1007/s00382-014-2407-y), 2014.
- [47] Touchan, R., D. Meko, **K.J. Anchukaitis**, Dendroclimatology in the Eastern Mediterranean, *Radiocarbon*, 56(4): S61–S68, doi:[10.2458/azu\\_rc.56.18321](https://doi.org/10.2458/azu_rc.56.18321), 2014.
- [46] **Anchukaitis, K.J.** and N. McKay, PAGES2k: Advances in Climate Field Reconstructions, *Past Global Changes Magazine*, 22(2), 98, 2014.
- [45] PAGES2k Consortium (Kaufman, D., K.J. Anchukaitis, U. Buentgen, J. Emile-Geay, M.N. Evans, H. Goosse, J. Luterbacher, J.E. Smerdon, L. von Gunten), A framework for community-driven climate reconstructions during the past two millennia, *EOS*, 95(40): 361-362, doi: [10.1002/2014EO4000012014](https://doi.org/10.1002/2014EO4000012014), 2014.
- [44] † Martin-Benito, D., N. Pederson, M. McDonald, P.J. Krusic, B.M. Buckley, **K.J. Anchukaitis**, R. D’Arrigo, L. Andreu-Hayles, and E. Cook. Dendrochronological dating of the World Trade Center ship, Lower Manhattan, New York City, *Tree-Ring Research*, 70(2), 65–77, doi: [10.3959/1536-1098-70.2.65](https://doi.org/10.3959/1536-1098-70.2.65), 2014.
- [43] Pederson, N., A. Hessel, N. Baatarbileg, **K.J. Anchukaitis**, N. DiCosmo, Pluvials, Droughts, the Mongol Empire, and Modern Mongolia, *Proceedings of the National Academy of Sciences*, 111(12):4375-4379, doi:[10.1073/pnas.1318677111](https://doi.org/10.1073/pnas.1318677111), 2014.
- [42] Touchan, R., **K.J. Anchukaitis**, V.V. Shishov, F. Sivrikaya, J. Attieh, M. Ketmen, J. Stephan, I. Mitsopoulos, A. Christou, D.M. Meko. Spatial Patterns of Eastern Mediterranean Climate Influence on Tree Growth, *The Holocene*, 24(4), 381–392, doi:[10.1177/0959683613518594](https://doi.org/10.1177/0959683613518594), 2014.
- [41] D’Arrigo, R.D., R. Wilson, **K.J. Anchukaitis**, Volcanic cooling signal in tree-ring temperature reconstructions for the past millennium, *Journal of Geophysical Research*, 118, 9000–9010, doi: [10.1002/jgrd.50692](https://doi.org/10.1002/jgrd.50692), 2013.
- [40] Cook, E.R., P.J. Krusic, **K.J. Anchukaitis**, B.M. Buckley, T. Nakatsuka, M. Sano and the PAGES Asia2k members, Tree-ring reconstructed summer temperature anomalies for temperate East Asia since 800 C.E., *Climate Dynamics*, 41(11), 2957–2972, doi: [10.1007/s00382-012-1611-x](https://doi.org/10.1007/s00382-012-1611-x), 2013.

- [39] Ummenhofer, C.C., R.D. D’Arrigo, **K.J. Anchukaitis**, B.M. Buckley, E.R. Cook, Links between Indo-Pacific Climate Variability and Drought in the Monsoon Asia Drought Atlas, *Climate Dynamics*, 40(5–6), 1319–1334, [doi:10.1007/s00382-012-1458-1](https://doi.org/10.1007/s00382-012-1458-1), 2013.
- [38] † Tolwinski-Ward, S.E. **K.J. Anchukaitis**, M.N. Evans, Bayesian parameter estimation and interpretation for an intermediate model of tree-ring width, *Climate of the Past*, 9, 1481–1493, [doi:10.5194/cp-9-1481-2013](https://doi.org/10.5194/cp-9-1481-2013), 2013.
- [37] Evans, M.N., S.E. Tolwinski-Ward, D.M. Thompson, **K.J. Anchukaitis**, Applications of proxy system modeling in high resolution paleoclimatology, *Quaternary Science Reviews*, 76, 16–28, [doi: 10.1016/j.quascirev.2013.05.024](https://doi.org/10.1016/j.quascirev.2013.05.024), 2013.
- [36] **Anchukaitis, K.J.**, R.D. D’Arrigo, L. Andreu-Hayles, D. Frank, A. Verstege, B.M. Buckley, A. Curtis, G.C. Jacoby, E.R. Cook, Tree-ring reconstructed summer temperatures from northwestern North America during the last nine centuries, *Journal of Climate*, 26(10), 3001–3012, [doi:10.1175/JCLI-D-11-00139.1](https://doi.org/10.1175/JCLI-D-11-00139.1), 2013.
- [35] PAGES 2k Consortium (M. Ahmed, **K.J. Anchukaitis**, A. Asrat, H.P. Borgaonkar, M. Braidia, B.M. Buckley, U. Büntgen, B.M. Chase, D.A. Christie, E.R. Cook, M.A.J. Curran, H.F. Diaz, J.Esper, Z-X. Fan, N.P. Gaire, Q. Ge, J. Gergis, J.F. González-Rouco, H. Goosse, S.W. Grab, N. Graham, R. Graham, M. Grosjean, S.T. Hanhijärvi, D.S. Kaufman, T. Kiefer, K. Kimura, A.A. Korhola, P.J. Krusic, A. Lara, A-M. Lézine, F.C. Ljungqvist, A.M. Lorrey, J. Luterbacher, Va. Masson-Delmotte, D. McCarroll, J.R. McConnell, N.P. McKay, M.S. Morales, A.D. Moy, R. Mulvaney, I.A. Mundo, T. Nakatsuka, D.J. Nash, R. Neukom, S.E. Nicholson, H. Oerter, J.G. Palmer, S.J. Phipps, M.R. Prieto, A. Rivera, M. Sano, M. Severi, T.M. Shanahan, X. Shao, F. Shi, M. Sigl, J.E. Smerdon, O.N. Solomina, E.J. Steig, B. Stenni, M. Thamban, V. Trouet, C.S.M. Turney, M. Umer, T. van Ommen, D. Verschuren, A.E. Viau, R. Villalba, B.M. Vinther, L. von Gunten, S. Wagner, E.R. Wahl, H. Wanner, J.P. Werner, J.W.C. White, K. Yasue, E. Zorita), Continental-scale temperature variability during the last two millennia, *Nature Geoscience*, 6, 339–346, [doi:10.1038/ngeo1797](https://doi.org/10.1038/ngeo1797), 2013.
- [34] † Bell, A.R., D.E. Osgood, B.I. Cook, **K.J. Anchukaitis**, G.R. McCarney, A.M. Greene, B.M. Buckley, E. R. Cook, Paleoclimate histories improve access and sustainability in index insurance programs, *Global Environmental Change*, 23(4), 774–781, [doi:10.1016/j.gloenvcha.2013.03.003](https://doi.org/10.1016/j.gloenvcha.2013.03.003), 2013.
- [33] **Anchukaitis, K.J.**, M. Taylor, J. Martin-Fernandez, D. Pons, M. Dell, C. Chopp, E. Castellanos, Annual chronology and climate response in *Abies guatemalensis* Rehder (Pinaceae) in Central America, *The Holocene*, 23(2), 270–277, [doi:10.1177/0959683612455548](https://doi.org/10.1177/0959683612455548), 2013.
- [32] Tierney, J.E., J.E. Smerdon, **K.J. Anchukaitis**, R. Seager, Multidecadal variability in East African hydroclimate controlled by the Indian Ocean, *Nature*, 493, 389–392, [doi:10.1038/nature11785](https://doi.org/10.1038/nature11785), 2013.
- [31] † Beck, P.S.A., L. Andreu-Hayles, R.D. D’Arrigo, **K.J. Anchukaitis**, C.J. Tucker, J.E. Pinzón, S.J. Goetz, A large-scale coherent signal of canopy status in maximum latewood density of tree rings at Arctic treeline in North America, *Global and Planetary Change*, 100, 109–118, [doi:10.1016/j.gloplacha.2012.10.005](https://doi.org/10.1016/j.gloplacha.2012.10.005), 2013.
- [30] **Anchukaitis, K.J.** and J.E. Tierney, Identifying coherent spatiotemporal modes in time-uncertain proxy paleoclimate records, *Climate Dynamics*, 41, 1291–1306, [doi:10.1007/s00382-012-1483-0](https://doi.org/10.1007/s00382-012-1483-0), 2013.
- [29] **Anchukaitis, K.J.**, P. Breitenmoser, K. R. Briffa, A. Buchwal, U. Büntgen, E. R. Cook, R. D. D’Arrigo, J. Esper, M.N. Evans, D. Frank, H. Grudd, B. Gunnarson, M.K. Hughes, A.V. Kirdyanov, C. Körner, P. Krusic, B. Luckman, T.M. Melvin, M.W. Salzer, A.V. Shashkin, C. Timmreck, E.A. Vaganov, R. Wilson, Tree rings and volcanic cooling, *Nature Geoscience*, 5, 836–837, [doi:10.1038/ngeo1645](https://doi.org/10.1038/ngeo1645), 2012.
- [28] Cook, B.I., A.R. Bell, **K.J. Anchukaitis**, B.M. Buckley, Snow and precipitation impacts on dry season streamflow in the Lower Mekong Basin, *Journal of Geophysical Research*, 117, D16116, [doi:10.1029/2012JD017708](https://doi.org/10.1029/2012JD017708), 2012.

- [27] Cook, B.I., **K.J. Anchukaitis**, J.O. Kaplan, M. Puma, M. Kelley, D. Gueyffier, Pre-Columbian deforestation as an amplifier of drought in Mesoamerica, *Geophysical Research Letters*, 39, L16706, doi:10.1029/2012GL052565, 2012.
- [26] Pederson, N., A.R. Bell, T.A. Knight, C. Leland, N. Malcomb, **K.J. Anchukaitis**, K. Tackett, J. Scheff, A. Brice, B. Catron, W. Blozan, J. Riddle, Long-term perspective on a modern drought in the American Southeast, *Environmental Research Letters*, 7, 014034, doi:10.1088/1748-9326/7/1/014034, 2012.
- [25] D’Arrigo, R.D., **K.J. Anchukaitis**, B.M. Buckley, E.R. Cook, R. Wilson, Regional climatic and North Atlantic Oscillation signatures in West Virginia red cedar over the past millennium, *Global and Planetary Change*, doi: 10.1016/j.gloplacha.2011.07.003, 84–85, 8–13, 2012.
- [24] † Andreu-Hayles, L., R.D. D’Arrigo, **K.J. Anchukaitis**, P. Beck, D. Frank, A. Verstege, S. Goetz, Varying boreal forest response to Arctic environmental change at the Firth River, Alaska, *Environmental Research Letters*, 6, 045503, doi:10.1088/1748-9326/6/4/045503, 2011.
- [23] † Bell, A.R., B.I. Cook, **K.J. Anchukaitis**, B.M. Buckley, E.R. Cook, Repurposing climate reconstructions for drought prediction in southeast Asia, *Climatic Change*, 106(4): 691–698, doi:10.1007/s10584-011-0064-2, 2011.
- [22] † Andreu-Hayles, L., O. Planells, E. Gutiérrez, E. Muntan, G. Helle, **K.J. Anchukaitis**, G. H. Schleser, Long tree-ring chronologies reveal 20th century increases in water-use efficiency but no enhancement of tree growth at five Iberian pine forests, *Global Change Biology*, 17(6), 2095–2112, doi:10.1111/j.1365-2486.2010.02373.x, 2011.
- [21] Vaganov, E.A., **K.J. Anchukaitis**, and M.N. Evans, How well understood are the processes that create dendroclimatic records? A mechanistic model of climatic control on conifer tree-ring growth dynamics, in M.K. Hughes, T.W. Swetnam, and H.F. Diaz (eds), *Dendroclimatology: Progress and Prospects*, Developments in Paleoecological Research, (Springer-Verlag), 11(2), 37–75, doi:10.1007/978-1-4020-5725-0\_3, 2011.
- [20] Meko, D.M, R. Touchan, and **Anchukaitis, K.J.**, SEASCORR: a MATLAB program for identifying the seasonal climate signal in an annual tree-ring time series, *Computers and Geosciences*, 37(9), 1234–1241, doi:10.1016/j.cageo.2011.01.013, 2011.
- [19] Cook, B.I., E.R. Cook, **K.J. Anchukaitis**, R. Seager, R. L. Miller, Forced and Unforced Variability of 20th Century North American Droughts and Pluvials, *Climate Dynamics*, 37(5), 1097–1110, doi: 10.1007/s00382-010-0897-9, 2011.
- [18] Touchan, R., **K.J. Anchukaitis**, D.M. Meko, M. Sabir, S. Attalah, A. Aloui, Spatiotemporal drought variability in northwestern Africa over the last nine centuries, *Climate Dynamics*, 37(1), 237–252, doi:10.1007/s00382-010-0804-4, 2011.
- [17] ‡ Tolwinski-Ward, S.E., M.N. Evans, M.K. Hughes, **K.J. Anchukaitis**, An efficient forward model of the climate controls on interannual variation in tree-ring width, *Climate Dynamics*, 36(11-12), 2419–2439, doi:10.1007/s00382-010-0945-5, 2011.
- [16] **Anchukaitis, K.J.**, B.M. Buckley, E.R. Cook, B.I. Cook, R.D. D’Arrigo, C.M. Ammann, The influence of volcanic eruptions on the climate of the Asian monsoon region, *Geophysical Research Letters*, 37, L22703, doi:10.1029/2010GL044843, 2010.
- [15] Cook, E.R., **K.J. Anchukaitis**, B.M. Buckley, R.D. D’Arrigo, G.C. Jacoby, W.E. Wright, Asian monsoon failure and megadrought during the last millennium, *Science*, 328(5977), 486–489, doi: 10.1126/science.1185188, 2010.
- [14] Buckley, B.M., **K.J. Anchukaitis**, D. Penny, R. Fletcher, E. R. Cook, M. Sano, Le Canh Nam, A. Wichienkeo, Ton That Minh, and Truong Mai Hong, Climate as a contributing factor in the demise of Angkor, Cambodia, *Proceedings of the National Academy of Sciences*, 107(15), 6748–6752, doi:10.1073/pnas.0910827107, 2010.
- [13] **Anchukaitis, K.J.** and M.N. Evans, Tropical cloud forest climate variability and the demise of the Monteverde Golden Toad, *Proceedings of the National Academy of Sciences*, 107(11), 5036–5040, doi:10.1073/pnas.0908572107, 2010.

- [12] Cook, B.I., E.R. Cook, **K.J. Anchukaitis**, P. Huth, J.E. Thompson, S. Smiley, A homogeneous record (1896-2006) of daily meteorology and climate at Mohonk Lake, New York, *Journal of Applied Meteorology and Climatology*, 49, 544–555, doi:10.1175/2009jamc2221.1, 2010.
- [11] Shanahan, T.M., J.T. Overpeck, **K.J. Anchukaitis**, J.W. Beck, J.E. Cole, D. Dettman, J. Peck, C.A. Scholz, J. King, Atlantic forcing of persistent drought in West Africa, *Science*, 324(5925), 377–380, doi:10.1126/science.1166352, 2009.
- [10] McCarroll, D., M.H. Gagen, N.J. Loader, I. Robertson, **K.J. Anchukaitis**, S.O. Los, R. Jalkanen, A. Kirchhofer, Objective correction of tree ring stable carbon isotope chronologies for changes in the carbon dioxide content of the atmosphere, *Geochimica et Cosmochimica Acta*, 73(6), 1539–1547, doi:10.1016/j.gca.2008.11.041, 2009.
- [9] D’Arrigo, R.D., G. Jacoby, B.M. Buckley, J. Sakulich, D. Frank, R. Wilson, A. Curtis, **K.J. Anchukaitis**, Tree growth and inferred temperature variability at the North American Arctic treeline, *Global and Planetary Change*, 65, 71–82, doi:10.1016/j.gloplacha.2008.10.011, 2009.
- [8] **Anchukaitis, K.J.**, M.N. Evans, N.T. Wheelwright, and D.P. Schrag, Isotope chronology and climate signal calibration in neotropical cloud forest trees, *Journal of Geophysical Research*, 113, G03030, doi:10.1029/2007JG000613, 2008.
- [7] Touchan, R., **K.J. Anchukaitis**, D.M. Meko, S. Attalah, C. Baisan, and A. Aloui, The long term context for recent drought in northwestern Africa, *Geophysical Research Letters*, 35, L13705, doi:10.1029/2008GL034264, 2008.
- [6] D’Arrigo, R.D., P. Baker, J. Palmer, **K.J. Anchukaitis** and G. Cook. Experimental reconstructions of monsoon drought variability for Australasia using tree rings and corals, *Geophysical Research Letters*, 35, L12709, doi:10.1029/2008GL034393, 2008.
- [5] **Anchukaitis, K.J.**, M.N. Evans, T. Lange, D.R. Smith., D.P. Schrag, and S.W. Leavitt, Consequences of a rapid cellulose extraction technique for oxygen isotope and radiocarbon analyses, *Analytical Chemistry*, 80(7), 2035–2041, doi:10.1021/ac7020272, 2008.
- [4] Gagen, M., D. McCarroll, N.J. Loader, I. Robertson, R. Jalkanen, and **K.J. Anchukaitis**, Exorcising the ‘segment length curse’: summer temperature reconstruction since AD1640 using non-detrended stable carbon isotope ratios from pine trees in Finnish Lapland, *The Holocene*, 17, 435–446, doi:10.1177/0959683607077012, 2007.
- [3] Evans, M.N., B.K. Reichert, A. Kaplan, **K.J. Anchukaitis**, E.A. Vaganov, M.K. Hughes, and M.A. Cane, A forward modeling approach to paleoclimatic interpretation of tree-ring data, *Journal of Geophysical Research*, 111, G03008, doi:10.1029/2006JG000166, 2006.
- [2] **Anchukaitis, K.J.**, M.N. Evans, A. Kaplan, E.A. Vaganov, M.K. Hughes, H.D. Grissino-Mayer, and M.A. Cane, Forward modeling of regional-scale tree-ring patterns in the southeastern United States and the recent emergence of summer drought stress, *Geophysical Research Letters*, 33(4), L04705, doi:10.1029/2005GL025050, 2006.
- [1] **Anchukaitis, K.J.** and S.P. Horn, A 2000-year reconstruction of forest disturbance from southern Pacific Costa Rica. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 221(1-2), 35–54, doi:10.1016/j.palaeo.2005.02.003, 2005.

#### *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. Troser, 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, Paleocceanography 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.