

William R. L. Anderegg
Associate Professor, University of Utah
Director, Wilkes Center for Climate Science and Policy, University of Utah
School of Biological Sciences
257 South 1400 East, Rm. 201, Salt Lake City, UT 84112-0840
anderegg@utah.edu | <http://anderegglab.net>

EDUCATION

- 2013 Ph.D., Department of Biology, Stanford University, Stanford, CA
- 2008 B.A. (Distinction and Honors), Human Biology, Stanford University, Stanford, CA

PROFESSIONAL EXPERIENCE

- 2022 – Present Director, Wilkes Center for Climate Science and Policy, University of Utah, Salt Lake City, UT
- 2021 – Present Associate Professor, School of Biological Sciences, University of Utah, Salt Lake City, UT
- 2015 – 2021 Assistant Professor, School of Biological Sciences, University of Utah, Salt Lake City, UT
- 2015 – 2016 Associate Research Scholar, Princeton Environmental Institute, Princeton University, Princeton NJ
- 2013 – 2015 National Oceanic and Atmospheric Administration Climate & Global Change Postdoctoral Fellow, Princeton Environmental Institute, Princeton University, Princeton, NJ

PEER REVIEWED PUBLICATIONS (⁺ *Anderegg lab post-doc, graduate student, or undergraduate student*)

152. Kannenberg, S.A., **W.R.L. Anderegg**, M.L. Barnes, M.P. Dannenberg, and A.K. Knapp (in press). Multi-scale analysis reveals dominant role of soil moisture in mediating dryland ecosystem fluxes. *Nature Geoscience*
151. Cabon⁺, A., A. Ameztegui, **W.R.L. Anderegg**, J. Martínez-Vilalta, and M. De Cáceres (2024). Probing the interplay of biophysical constraints and photosynthesis to model tree growth. *Agricultural and Forest Meteorology*. 345: 109852.
150. **Anderegg, W.R.L.**, T. Collins, S. Grineski, S. Nicholls, C. Nolte (2023). Climate change greatly escalates forest disturbance risks to US property values. *Environmental Research Letters*. 18: 094011
149. Lauck, K., A. Ke, E. M. Olimpi, D. Paredes, K. Hood, T. Phillips, **W.R.L. Anderegg**, and D. S. Karp (2023). Agriculture and hot temperatures interactively erode the nest success of habitat generalist birds across the United States. *Science*. 382: 290-294
148. Quetin, G. R., L.D.L. Anderegg, I. Boving, I., **W.R.L. Anderegg** and A.T. Trugman (2023). Observed forest trait velocities have not kept pace with hydraulic stress from climate change. *Global Change Biology*, 29: 5415-5428.
147. Cabon⁺, A., R.J. DeRose, J.D. Shaw, and **W.R.L. Anderegg** (2023). Declining tree growth resilience mediates subsequent forest mortality in the US Mountain West. *Global Change Biology*. 29: 4826-4841
146. Wu⁺, C., S. R. Coffield, M. L. Goulden, J. T. Randerson, A. T. Trugman, and **W.R.L. Anderegg** (2023). Uncertainty in US forest carbon storage potential due to climate risks. *Nature Geoscience*. <https://doi.org/10.1038/s41561-023-01166-7>

145. Cabon⁺, A., and **W.R.L. Anderegg** (2023). Large volcanic eruptions illuminate physiological controls of tree growth and photosynthesis. *Ecology Letters*. <https://doi.org/10.1111/ele.14149>
144. Kannenberg⁺, S. A., M.L. Barnes, D. R. Bowling, A.W. Driscoll, J.S. Guo, and **W.R.L. Anderegg** (2023). Quantifying the drivers of ecosystem fluxes and water potential across the soil-plant-atmosphere continuum in an arid woodland. *Agricultural and Forest Meteorology*. 329: 109269.
143. Kerr⁺, K., J.C. Fickle⁺, and **W.R.L. Anderegg** (2023). Decoupling of functional traits from intraspecific patterns of growth and drought stress resistance. *New Phytologist*. doi: 10.1111/nph.18937
142. Tai, X., A.T. Trugman, and **W.R.L. Anderegg** (2023). Linking remotely sensed ecosystem resilience with forest mortality across the continental United States. *Global Change Biology*. 4: 1096-1105
141. Holm, J.A., D. Medvigy, B. Smith, J.S. Dukes, C. Beier, M. Mishurov, X. Xu, J. Lichstein, C. Allen, K. Larsen, Y. Luo, C. Ficken, W.T. Pockman, **W.R.L. Anderegg**, A. Rammig (2023) Exploring the impacts of unprecedented climate extremes on forest ecosystems: hypotheses to guide modeling and experimental studies. *Biogeosciences*. <https://doi.org/10.5194/bg-2022-65>
140. Zhu, C., J. Wolf, J. Zhang, **W.R.L. Anderegg**, J.A. Bunce, and L.H. Ziska (2023). Rising temperatures can negate CO₂ fertilization effects on global staple crop yields: A meta-regression analysis. *Agricultural and Forest Meteorology*. 342: 109737
139. Li, B., S.P. Good, R.P. Fiorella, C.E. Finkenbiner, G.J. Bowen, D.C. Noone, C.J. Still, and **W.R.L. Anderegg** (2023). Stable isotopes contain substantial additive information about terrestrial carbon and water cycling. *Environmental Research Letters*. 18: 094065.
138. Magargal, K., K. Wilson, S. Chee, M.J. Campbell, V. Bailey, P.E. Dennison, **W.R.L. Anderegg**, A. Cachelin, S. Brewer, and B. Coddling (2023). The impacts of climate change, energy policy and traditional ecological practices on future firewood availability for Diné (Navajo) People. *Philosophical Transactions of the Royal Society B*. 1889: 20220394.
137. Samuels-Crow, K.E., D. Peltier, Y. Liu, J. Guo, J. Welker, **W.R.L. Anderegg**, G. Koch, C. Schwalm, M. Litvak, J. Shaw, K. Ogle (2023). The importance of monsoon precipitation for foundation tree species across the semiarid Southwestern US. *Frontiers in Forests and Global Change*. 6:1116786.
136. **Anderegg, W.R.L.**, C. Wu⁺, N. Acil, N. Carvalhais, T.A.M. Pugh, J.P. Sadler, R. Seidl (2022). A climate risk analysis of Earth's forests in the 21st century. *Science*. 377: 1099-1103
- Reported by 49 news outlets including Bloomberg Business and Yahoo News
135. Peltier, D, **W.R.L. Anderegg**, J. Guo, Jessica and K. Ogle (2022). Contemporary tree growth shows altered climate memory. *Ecology Letters*. 25: 2663-2674
134. Cabon⁺, A., S.A. Kannenberg⁺, A. Arain, F. Babst, S. Belmecheri, N. Delpierre, R. Guerrieri, J.T. Maxwell, S. McKenzie, F.C. Meinzer, D.J. Moore, C. Pappas, A. Rocha, P. Szejner, M. Ueyama, D. Ulrich, C. Vincke, S.L. Voelker, J. Wei, D. Woodruff, and **W.R.L. Anderegg** (2022). Cross-biome synthesis of source versus sink limits to tree growth. *Science*. 376: 758-761
- Reported by 32 news outlets including Axios and Yahoo News
133. **Anderegg, W.R.L.**, A.T. Trugman, J. Wang, J., and C. Wu⁺. (2022). Open science priorities for rigorous nature-based climate solutions. *PLoS Biology*. 20: e3001929.

132. Coffield, S., C. Vo, J. Wang, G. Badgley, M. Goulden, D. Cullenward, **W.R.L. Anderegg**, and J. T. Randerson (2022). Using remote sensing to quantify the additional climate benefits of California forest carbon offset projects. *Global Change Biology*. <https://doi.org/10.1111/gcb.16380>
131. Hawkins, L., M. Bassouni, **W.R.L. Anderegg**, S. Good, H. Kwon, C. Hanson, R. Fiorella, G. Bowen, and C. Still (2022). Comparing Model Representations of Physiological Limits on Transpiration at a Semi-arid Ponderosa Pine Site. *Journal of Advances in Modeling Earth Systems*. 14: e2021MS002927
130. **Anderegg***, **W.R.L.**, O. Chegwidden*, G. Badgley⁺, A.T. Trugman, D. Cullenward, J. Abatzoglou, J.A. Hicke, J. Freeman, and J.J. Hamman (2022). Future climate risks from stress, insects and fire across US forests. *Ecology Letters*. 25: 1510-1520, *Contributed equally
 - Reported by 37 news outlets including Newsweek, Eos, Bloomberg, and the Wall Street Journal
129. Kerr⁺, K.L., L.D.L. Anderegg, N. Zenes⁺, and **W.R.L. Anderegg** (2022). Quantifying within-species trait variation in space and time reveals limits to trait-mediated drought response. *Functional Ecology*. doi: 10.1111/1365-2435.14112
128. Kannenberg⁺, S.A., A. Cabon⁺, F. Babst, S. Belmecheri, N. Delpierre, R. Guerrieri, J.T. Maxwell, F.C. Meinzer, D. Moore, C. Pappas, D. Ueyama, D. Ulrich, S. Voelker, D. Woodruff, and **W.R.L. Anderegg** (2022). Drought-induced decoupling between carbon uptake and tree growth impacts forest carbon turnover time. *Agricultural and Forest Meteorology*. 322: 108996
127. Novick, K. A., S. Metzger, **W.R.L. Anderegg**, M. Barnes, D. Cala, K. Guan, and 10 other authors. (2022). Informing Nature-based Climate Solutions for the United States with the best-available science. *Global Change Biology*. 28: 3778-3794
126. McDowell, N. G., Sapes, G., Pivovarov, A., Adams, H. D., Allen, C. D., **W.R.L. Anderegg**, ... 27 other authors. (2022). Mechanisms of woody-plant mortality under rising drought, CO₂ and vapour pressure deficit. *Nature Reviews Earth & Environment*, 3: 294-308
125. Serra-Maluquer, X., A. Gazol, **W.R.L. Anderegg**, J. Martínez-Vilalta, M. Mencuccini, and J.J. Camarero (2022). Wood density and hydraulic traits influence species' growth response to drought across biomes. *Global Change Biology*. 28: 3871-3882
124. Fiorella⁺, R.P., S.A. Kannenberg⁺, **W.R.L. Anderegg**, R.K. Monson, and J.R. Ehleringer (2022). Heterogeneous isotope effects decouple conifer leaf and phloem sugar $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$. *Oecologia*. 198: 357-370
123. Kannenberg⁺, S.A., A.W. Driscoll, P. Szejner, **W.R.L. Anderegg**, and J. Ehleringer (2022). Rapid increases in shrubland and forest intrinsic water-use efficiency during an ongoing megadrought. *Proceedings of the National Academy of Sciences*. 118: e2118052118
122. **Anderegg, W.R.L.**, J. Abatzoglou, L.D.L. Anderegg, L. Bielory, P. Kinney and L. Ziska (2021). Anthropogenic climate change is worsening North American pollen seasons. *Proceedings of the National Academy of Sciences*. 118: e2013284118
 - Reported by 380 news outlets including New York Times, Associated Press, Washington Post, Wall Street Journal, Time Magazine, Atlantic, Bloomberg, NBC Nightly News
121. Trugman, A. T., L.D.L. Anderegg, **W.R.L. Anderegg**, A.J. Das, and N.L. Stephenson (2021). Why is tree drought mortality so hard to predict? *Trends in Ecology & Evolution*. 36: 520-532

120. Badgley⁺, G., J. Freeman, J.J. Hamman, B. Haya, A.T. Trugman, **W.R.L. Anderegg**, and D. Cullenward. Systematic over-crediting in California's forest carbon offsets program. *Global Change Biology*. doi.org/10.1111/gcb.15943
119. Wang, Y., **W.R.L. Anderegg**, M. Venturas⁺, A.T. Trugman, K. Yu, and C. Frankenberg (2021). Optimization theory explains nighttime stomatal responses. *New Phytologist*. 230: 1550-1561.
118. Flo, V., J. Martínez-Vilalta, M. Mencuccini, V. Granda, **W.R.L. Anderegg**, and R. Poyatos (2021). Climate and functional traits jointly mediate tree water-use strategies. *New Phytologist*. doi.org/10.1111/nph.17404
117. **Anderegg, W.R.L.** (2021). Gambling With the Climate: How Risky of a Bet Are Natural Climate Solutions? *AGU Advances*. 2:e2021AV000490
116. Kannenberg⁺, S. A., J. Guo, K.A. Novick, **W.R.L. Anderegg**, X. Feng, D. Kennedy, A.G. Konings, J. Martínez-Vilalta, and A.M. Matheny (2021). Opportunities, challenges and pitfalls in characterizing plant water-use strategies. *Functional Ecology*. doi.org/10.1111/1365-2435.13945
115. Konings, A., and 34 authors including **W.R.L. Anderegg**. Detecting forest response to droughts with global observations of vegetation water content. *Global Change Biology*. 27: 6005-6024
114. Potkay, A. A.T. Trugman, **W.R.L. Anderegg**, M.V. Venturas⁺, Y. Wang, and Y.F. Reinfelder (2021). Coupled whole-tree optimality and xylem-hydraulics explain dynamic biomass partitioning. *New Phytologist*. 230: 2226-2245
113. Campbell, M. J., P. Dennison, K.L. Kerr⁺, S. Brewer, and **W.R.L. Anderegg** (2021). Scaled biomass estimation in woodland ecosystems: Testing the individual and combined capacities of satellite multispectral and lidar data. *Remote Sensing of Environment*. 262: 112511.
112. Peltier, D. M., J. Guo, P. Nguyen, M. Bangs, M. Wilson, K. Samuels-Crow, L.L. Yocom, Y. Liu, M. Fell, J.D. Shaw, D. Auty, C. Schwalm, **W.R.L. Anderegg**, G.W. Koch, M.E. Litvak, and K. Ogle (2021). Temperature memory and non-structural carbohydrates mediate legacies of a hot drought in trees across the southwestern US. *Tree Physiology*. doi.org/10.1093/treephys/tpab091
111. Fiorella⁺, R.P., S.P. Good, S. Allen, J. Guo, C.J. Still, D.C. Noone, **W.R.L. Anderegg**, C.R. Florian, H. Luo, N. Pingintha-Durden, and G.J. Bowen (2021). Calibration Strategies for Detecting Macroscale Patterns in NEON Atmospheric Carbon Isotope Observations. *Journal of Geophysical Research: Biogeosciences*, 126: p.e2020JG005862.
110. Cabon⁺, A., and **W.R.L. Anderegg** (2021). Turgor-driven tree growth: scaling-up sink limitations from the cell to the forest. *Tree Physiology*. doi.org/10.1093/treephys/tpab146
109. Klein, T., and **W.R.L. Anderegg** (2021). Global warming and urban population growth in already warm regions drive a vast increase in heat exposure in the 21st century. *Sustainable Cities and Society*. 73: 103098-105
108. Bay, R.A., D.S. Karp, J.F. Saraco, **W.R.L. Anderegg**, L. Frishkoff, D. Wiedenfeld, T. Smith, and K. Ruegg (2021). Genetic variation reveals individual-level climate tracking across the full annual cycle of a migratory bird. *Ecology Letters*. 24: 819-828

107. Kerr⁺, K., N. Zenes⁺, A.T. Trugman, and **W.R.L. Anderegg** (2021). Testing the effects of species interactions and water limitation on tree seedling biomass allocation and physiology. *Tree Physiology*. 41: 1323–1335
106. Ballantyne, A., Z. Liu, **W.R.L. Anderegg**, Z. Yu, P. Stoy, B. Poulter, J. Vanderwal, J. Watts, K. Kelsey, and J. Neff. Reconciling carbon cycle processes from ecosystem to global scales (2021). *Frontiers in Ecology and the Environment*. 19: 57-65
105. Kannenberg⁺, S.A., A.W. Driscoll, D. Malesky, and **W.R.L. Anderegg** (2021). Rapid and surprising dieback of Utah juniper in the southwestern USA due to acute drought stress. *Forest Ecology and Management*. 480: 118639
104. Venturas⁺, M.V., H.N. Todd⁺, A.T. Trugman⁺, and **W.R.L. Anderegg** (2021). Understanding and predicting forest mortality in the western United States using long-term forest inventory data and modeled hydraulic damage et al. *New Phytologist*. 230: 1896-1910
103. Kannenberg⁺, S., R. Fiorella, **W.R.L. Anderegg**, R. Monson, and J. Ehleringer (2021). Seasonal and diurnal trends in progressive isotope enrichment along needles in two pine species. *Plant, Cell & Environment*. 44: 143-155
102. Tai⁺, X., **W.R.L. Anderegg**, P.D. Blanken, S.P. Burns, L. Christensen, and P.D. Brooks (2020). Large hillslope hydrology influences on the long term and inter-annual variations of remotely sensed ecosystem productivity. *Water Resources Research*. 56: e2020WR027630
101. **Anderegg, W.R.L.**, A. T. Trugman⁺, G. Badgley⁺, A. Konings, and J. Shaw (2020). Divergent forest sensitivity to repeated extreme droughts. *Nature Climate Change*. 10: 1091–1095
100. Peltier, D. J. Guo, P. Nguyen, M. Bangs, L. Gear, M. Wilson, S. Jefferys, K. Samuels-Crow, L. L. Yocom, Y. Liu, M.K. Fell, D. Auty, C. Schwalm, **W.R.L. Anderegg**, G.W. Koch, M.E. Litvak, and K. Ogle (2020). Temporal controls on crown non-structural carbohydrates and links to sapwood storage in southwestern US tree species. *Tree Physiology*. 41:388-402
99. Batllori, E., F. Lloret, T. Aakala, **W.R.L. Anderegg** and 23 other authors (2020). Forest and woodland replacement patterns following drought-related mortality. *Proceedings of the National Academy of Sciences*. 117 (47) 29720-29729
98. **Anderegg, W.R.L.**, A.T. Trugman⁺, G. Badgley⁺, C.M. Anderson, A. Bartuska, P. Ciais, D. Cullenward, C.B. Field, J. Freeman, S.J. Goetz, J.A. Hicke, D. Huntzinger, R.B. Jackson, J. Nickerson, S. Pacala, and J.T. Randerson (2020). Climate-driven risks to the climate mitigation potential of forests. *Science*. 368: eaaz7005
- Reported by 30 news outlets including Bloomberg, the Guardian, Grist, Gizmodo, Rolling Stone
97. Mendoza, D., C. Pirozzi, E. Crosman, T. Liou, Y. Zhang, J. Cleaves, S. Bannister, **W.R.L. Anderegg**, and R. Paine III (2020). Impact of Low-Level Fine Particulate Matter and Ozone Exposure on Absences in K-12 Students and Economic Consequences. *Environmental Research Letters*. 15: 114052
96. Trugman⁺, A.T., L.D.L. Anderegg, J. Shaw, and **W.R.L. Anderegg** (2020). Trait velocities reveal that mortality has driven widespread coordinated shifts in forest hydraulic trait composition. *Proceedings of the National Academy of Sciences*. 117 (15) 8532-8538
95. Kannenberg⁺, S.A., C. Schwalm, and **W.R.L. Anderegg** (2020). Ghosts of the past: How drought legacy effects shape forest functioning and carbon cycling. *Ecology Letters*. 23: 891-901

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93. Wang, Y., J. Sperry, **W.R.L. Anderegg**, M. Venturas⁺, and A.T. Trugman⁺ (2020). A theoretical and empirical assessment of stomatal optimization modeling. *New Phytologist*. doi.org/10.1111/nph.16572
92. Zenes⁺, N., K.L. Kerr⁺, A.T. Trugman⁺, and **W.R.L. Anderegg** (2020). Competition and drought alter optimal stomatal strategy in seedlings. *Frontiers in Plant Science*. 11: 478-88
91. Kannenberg⁺, S.A., D.R. Bowling, and **W.R.L. Anderegg** (2020). Hot moments in ecosystem fluxes: High GPP anomalies exert outsized influence on the carbon cycle and are differentially driven by moisture availability across biomes. *Environmental Research Letters*. 15: 054004
90. Campbell, M., P.E. Dennison, J.W. Tune, S.A. Kannenberg⁺, K.L. Kerr⁺, B. Coddig, and **W.R.L. Anderegg** (2020). A multi-sensor, multi-scale approach to mapping tree mortality in pinyon-juniper woodlands. *Remote Sensing of Environment*. doi.org/10.1016/j.rse.2020.111853
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88. **Anderegg, W.R.L.**, A.T. Trugman⁺, D.R. Bowling, G. Salvucci and S. Tuttle (2019). Plant functional traits and climate influence drought intensification and land-atmosphere feedbacks. *Proceedings of the National Academy of Sciences*. 116: 14071-14076
87. Yu⁺, K., W.K. Smith, A.T. Trugman⁺, 12 co-authors, and **W.R.L. Anderegg** (2019). Pervasive decreases in living vegetation carbon turnover time across forest climate zones. *Proceedings of the National Academy of Sciences*. 116: 24662-24667
86. Tai⁺, X., D.S. Mackay, B.E. Ewers, A.D. Parsekian, D. Beverly, H. Speckman, P.D. Brooks and **W.R.L. Anderegg** (2019). Plant Hydraulic Stress Explained Tree Mortality and Tree Size Explained Beetle Attack in a Mixed Conifer Forest. *Journal of Geophysical Research – Biogeosciences*. 124: 3555-3568
85. Trugman⁺, A.T., L.D.L. Anderegg, J.S. Sperry, M. Venturas⁺, Y. Wang, and **W.R.L. Anderegg** (2019). Leveraging plant hydraulics to yield predictive and dynamic plant leaf allocation in vegetation models with climate change. *Global Change Biology*. 25: 4008-4021
84. Sperry*, J.S., M.D. Venturas⁺, H. Todd, A. T. Trugman⁺, **W.R.L. Anderegg**, Y. Wang and X. Tai⁺ (2019). The impact of rising CO₂ and acclimation on the response of US forests to global warming. *Proceedings of the National Academy of Sciences*. 116: 25734-25744 *=contributed equally
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79. **Anderegg, W.R.L.**, L.D.L. Anderegg, and C.Y. Huang (2019). Testing early warning metrics for drought-induced tree physiological stress and mortality. *Global Change Biology*. 25: 2459-2469
78. Trugman⁺, A.T., L.D.L. Anderegg, B.T. Wolfe, B. Birami, N.K. Ruehr, M. Detto, M.K. Bartlett, and **W.R.L. Anderegg** (2019). Climate and plant trait strategies determine tree carbon allocation to leaves and mediate future forest productivity. *Global Change Biology*. 25: 3395-3405
77. Hammond, W., K. Yu⁺, L. Wilson, R. Will, **W.R.L. Anderegg**, and H. Adams (2019). Dead or dying? Quantifying the point of no return from hydraulic failure in drought-induced tree mortality. *New Phytologist*. 223: 1834-1843
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73. Yu⁺, K., P. D'Odorico, S. Collins, C. David, A. Porporato, **W.R.L. Anderegg**, et al. (2019). The competitive advantage of a constitutive CAM species over a C4 grass species under drought and CO₂ enrichment. *Ecosphere*. 10: e02721
72. Martinez-Vilalta*, J., **W.R.L. Anderegg***, G. Sapes, and A. Sala* (2019). Greater focus on water pools may improve our ability to understand and anticipate drought-induced mortality in plants. *New Phytologist*. 223: 22-32
*Contributed equally
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69. **Anderegg, W.R.L.**, A.G. Konings, A.T. Trugman⁺, K. Yu⁺, D.R. Bowling, R. Gabbitas⁺, D. Karp, S. Pacala, J.S. Sperry, B. Sulman, N. Zenes⁺ (2018). Hydraulic diversity of forests regulates ecosystem resilience during drought. *Nature*. 561: 538-541
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64. **Anderegg, W.R.L.**, A. Wolf, A. Arango-Velez, B. Choat, D.J. Chmura, S. Jansen, T. Kolb, S. Li, F. Meinzer, P. Pita, V. Resco de Dios, J.S. Sperry, B.T. Wolfe, and S.W. Pacala (2018). Woody plants optimise stomatal behaviour relative to hydraulic risk. *Ecology Letters*. 21: 968-977
63. Trugman⁺, A.T., D. Medvigy, J. Mankin, and **W.R.L. Anderegg** (2018). Soil moisture stress as a major driver of carbon cycle uncertainty. *Geophysical Research Letters*. doi.org/10.1029/2018GL078131
62. Stuart-Haëntjens, E., H.J. De Boeck, N.P. Lemoine, P. Mänd, G. Kröel-Dulay, I.K. Schmidt, A. Jentsch, A. Stampfli, **W.R.L. Anderegg**, M. Bahn, J. Kreyling, T. Wohlgemuth, F. Lloret, A.T. Classen, C.M. Gough, and M.D. Smith (2018). Mean annual precipitation predicts primary production resistance and resilience to extreme drought. *Science of the Total Environment*. 636: 360-366
61. Pellegrini, A.F.A., A. Ahström, S. E. Hobbie, P. B. Reich, L. Nieradzik, K. M. Robertson, A. C. Staver, B. Scharenbroch, A. Jumpponen, **W.R.L. Anderegg**, J. Randerson, and R.B. Jackson (2018). Fire frequency drives decadal changes in soil carbon and nitrogen and ecosystem productivity. *Nature*. 553: 194–198
60. Hartmann, H., C. Moura, **W.R.L. Anderegg**, and 14 others (2018). Research frontiers for improving our understanding of drought-induced tree and forest mortality. *New Phytologist*. 218: 15-28
59. Trugman⁺, A.T., D. Medvigy, **W.R.L. Anderegg**, and S. Pacala (2018). Differential declines in Alaskan boreal forest vitality related to atmospheric drought stress. *Global Change Biology*. DOI: 10.1111/gcb.13952
58. Fisher, R.A., C.D. Koven, **W.R.L. Anderegg**, BO Christoffersen, MC Dietze, C Farris, J Holm, G Hurtt, RG Knox, PJ Lawrence, JW Lichtstein, M Longo, A Matheny, D Medvigy, H Muller-Landau, TL Powell, SP Serbin, H Sato, J Shuman, B Smith, AT Trugman⁺, T Viskari, H Verbeeck, E Weng, C Xu, X Xu, T Zhang and P Moorcroft (2018). Vegetation Demographics in Earth System Models: a review of progress and priorities. *Global Change Biology*. 34: 35-54
57. **Anderegg, W.R.L.** (2018) Quantifying seasonal and diurnal variation of stomatal behavior in a hydraulic-based stomatal optimization model. *Journal of Plant Hydraulics*. 5, e001. doi.org/10.20870/jph.2018.e001
56. Bowling, D., B.A Logan, K. Hufkens, D.M Aubrecht, A.D Richardson, S.P Burns, **W.R.L. Anderegg**, P.D Blanken and D. Eiriksson (2018). Limitations to winter and spring photosynthesis of a Rocky Mountain subalpine forest. *Agricultural and Forest Meteorology*. 252: 241-255
55. Truettner, C., **W.R.L. Anderegg**, F. Biondi, G.W. Koch, K. Ogle, C. Schwalm, M.E. Litvak, J.D. Shaw, and E. Ziaco. Seasonal Climate Responses and Drought Legacy Effects in Tree-Ring Chronologies from the Southwestern USA (2018). *Forest Ecology and Management*. doi: 10.1016/j.foreco.2018.01.044

54. Hartmann, H., B. Schuldt, T.G. Sanders, C. Macinnis-Ng, H.J. Boehmer, C.D. Allen, A. Bolte, T. Crowther, M.C. Hansen, B.E. Medlyn, N.K. Ruehr, and **W.R.L. Anderegg** (2018). Monitoring global tree mortality patterns and trends. Report from the VW symposium ‘Crossing scales and disciplines to identify global trends of tree mortality as indicators of forest health’. *New Phytologist*, 217: 984-987.
53. Klein, T., M. Zeppel, **W.R.L. Anderegg**, J. Bloemen, M. De Kauwe, P. Hudson, N. Ruehr, T. Powell, G. von Arx, and A. Nardini (2018). Embolism refilling and resilience against drought-induced mortality: Processes, trade-offs and life history strategies. *Ecological Research*. doi: 10.1007/s11284-018-1588y
52. Yu⁺, K., D. Carr, **W.R.L. Anderegg**, K. Tully, P. D’Odorico (2018). Response of a facultative CAM plant and its competitive relationship with a grass to changes in rainfall regime. *Plant and Soil*. 2: 321-333
51. C.R. Schwalm, **W.R.L. Anderegg**, A.M. Michalak, F. Biondi, G. Koch, M. Litvak, K. Ogle, J.D. Shaw, A. Wolf, D.N. Huntzinger, K. Schaefer, J.B. Fisher, R. Cook, Y. Wei, Y. Fang, A. Jain, D. Hayes, M. Huang, and H. Tian (2017). Global patterns of drought recovery. *Nature*. 548: 202–205
 - Reported by: Reuters, Pacific Standard; Highlighted in *Nature News & Views*
50. Cobb, R., K. Ruthrof, D. Breshears, F. Lloret, T. Aakala, H.D. Adams, C.D. Allen, **W.R.L. Anderegg**, and 15 other authors (2017). Ecosystem Dynamics and Management After Forest Die-off: A Global Synthesis with Conceptual State-and-Transition Models. *Ecosphere*. 8: e02034
49. Li, Y., K. Guan, P. Gentine, A.G. Konings, F.C. Meinzer, J.S. Kimball, X. Xu, **W.R. L. Anderegg**, N.G. McDowell, J. Martínez-Vilalta, D.G. Long, and S.P. Good (2017). Estimating global ecosystem iso/anisohydry using active and passive microwave satellite data. *Journal of Geophysical Research – Biogeosciences*. 122: 3306–3321
48. **Anderegg, W.R.L.**, A. Wolf, A. Arango-Velez, B. Choat, D.J. Chmura, S. Jansen, T. Kolb, S. Li, F. Meinzer, P. Pita, V. Resco de Dios, J.S. Sperry, B.T. Wolfe, and S.W. Pacala (2017). Plant water potential improves prediction of empirical stomatal models. *PLoS ONE*. e0185481: doi.org/10.1371/journal.pone.0185481
47. H.D. Adams, M.J.B. Zeppel, **W.R.L. Anderegg**, Henrik Hartmann, and 48 others (2017). A multi-species synthesis of physiological mechanisms in drought-induced tree mortality. *Nature Ecology & Evolution*. 1: 1285–1291
46. Pellegrini, A.F.A., **W.R.L. Anderegg**, C.E.T. Paine, W.A. Hoffmann, T. Kartzinel, S. Rabin, D. Sheil, A.C. Franco, and S.W. Pacala (2017). Convergence of bark investment according to fire and climate structures ecosystem vulnerability to future change. *Ecology Letters*. 20: 307–316
 - Highlighted in *Nature* research highlights section
45. Ballantyne, A.P., W.K. Smith, **W.R.L. Anderegg**, P. Kauppi, J. Sarmiento, P.P. Tans, E. Shevliakova, Y. Pan, B. Poulter, A. Anav, P. Friedlingstein, R.A. Houghton, S. Running (2017) Accelerating net terrestrial carbon uptake during warming hiatus due to reduced respiration. *Nature Climate Change*. 7: 148-152
44. Tai, X., D.S. Mackay, **W.R.L. Anderegg**, J.S. Sperry, P.D. Brooks (2017). Plant hydraulics improves and topography mediates prediction of aspen mortality in southwestern USA. *New Phytologist*. 213: 113–127
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42. Gazol, A., J.J. Camarero, **W.R.L. Anderegg**, and S.M. Vicente-Serrano (2017). Impacts of droughts on the growth resilience of Northern Hemisphere forests. *Global Ecology and Biogeography*. 26: 166–176
41. **Anderegg, W.R.L.**, T. Klein, M. Bartlett, L. Sack, A. Pellegrini, B. Choat, S. Jansen (2016). Meta-analysis reveals that hydraulic traits explain cross-species patterns of drought-induced tree mortality across the globe. *Proceedings of the National Academy of Sciences*. 113: 5024-5029
40. Wolf, A., **W.R.L. Anderegg**, and S.W. Pacala (2016). Optimal stomatal behavior with competition for water and risk of hydraulic impairment. *Proceedings of the National Academy of Sciences*. 113: E7222-E7230
39. Sperry, J.S., Y. Wang, B. Wolfe, D.S. Mackay, **W.R.L. Anderegg**, N.G. McDowell, and W.T. Pockman (2016). Pragmatic hydraulic theory predicts stomatal responses to climatic water deficits. *New Phytologist*. 212: 577–589
38. **Anderegg, W.R.L.**, J. Martinez-Vilalta, M. Cailleret, J.J. Camarero, B. Ewers, D. Galbraith, A. Gessler, R. Grote, C.Y. Huang, S. Levick, T.L. Powell, L. Rowland, R. Sánchez-Salguero, V. Trotsiuk (2016). When a tree dies in the forest: Scaling climate-driven tree mortality to ecosystem fluxes. *Ecosystems*. 19: 1133–1147
37. Cook, J., N. Oreskes, P.T. Doran, **W.R.L. Anderegg**, B. Verheggen, E. Maibach, J.S. Carlton, S. Lewandowsky, A.G. Skuce, S.A. Green, D. Nuccitelli, P. Jacobs, M. Richardson, B. Winkler, R. Painting and K. Rice (2016). Consensus on consensus: a synthesis of consensus estimates on human-caused global warming. *Environmental Research Letters* 11: 048002-9
 - Reported by: Washington Post, the Guardian, Grist, top-read post on Reddit
36. Smith, W.K., S.C. Reed, A.P. Ballantyne, C.C. Cleveland, **W.R.L. Anderegg**, W.R. Wieder, S.W. Running (2016). Large divergence of satellite and Earth system model estimates of global terrestrial CO₂ fertilization. *Nature Climate Change*. 6: 306-310
35. Wolf, A., N. Zimmermann, **W.R.L. Anderegg**, P. Busby, and J. Christenson. Altitudinal shifts of the native and introduced flora of California in the context of 20th-century warming (2016). *Global Ecology and Biogeography*. 25: 418–429
 - Reported by: The Atlantic
34. **Anderegg, W.R.L.**, C. Schwalm, F. Biondi, J.J. Camarero, G. Koch, M. Litvak, K. Ogle, J.D. Shaw, E. Shevliakova, A.P. Williams, A. Wolf, E. Ziaco, S. Pacala (2015). Pervasive drought legacies in forest ecosystems and their implications for carbon cycle models. *Science*. 349: 528-532.
 - Reported by: Newsweek, Washington Post, New York Times, Pacific Standard, & others
33. **Anderegg, W.R.L.**, A. Ballantyne, W.K. Smith, J. Majkut, S. Rabin, P.E. Kauppi, C. Beaulieu, R. Birdsey, J. Dunne, R.A. Houghton, R.B. Myneni, Y. Pan, J. Sarmiento, N. Serota, E. Shevliakova, P. Tans, and S. Pacala (2015). Tropical nighttime warming as a dominant driver of variability in the terrestrial carbon sink. *Proceedings of the National Academy of Sciences*. 12: 15591-15596
32. **Anderegg, W.R.L.**, and N. Duffenbaugh. Observed and projected climate trends and hotspots across the National Ecological Observatory Network (NEON) regions (2015). *Frontiers in Ecology and the Environment*. 13: 547–552
31. Quentin, A.G., E.A. Pinkard, M.G. Ryan, D.T. Tissue, L.S. Baggett, H.D. Adams, P. Maillard, J. Marchand, S.M. Lanhäuser, A. Lacoite, Y. Gibon, **W.R.L. Anderegg**, and 30 others (2015). Assessing non-structural carbohydrates: can results be quantitatively compared among laboratories? *Tree Physiology*. 35: 1146-1165

30. **Anderegg, W.R.L.**, A. Flint, C. Huang, L. Flint, J.A. Berry, F.W. Davis, J.S. Sperry, and C.B. Field (2015). Tree mortality predicted from drought-induced vascular damage. *Nature Geoscience*. 8: 367-371
 - Reported by: New York Times, Pacific Standard, Energy & Environment, Colorado Public Radio
29. **Anderegg, W.R.L.**, J.A. Hicke, R.A. Fisher, C.D. Allen, J. Aukema, B. Bentz, S. Hood, J.W. Lichstein, A.K. Macalady, N. McDowell, K. Raffa, Y. Pan, A. Sala, J. Shaw, N.L. Stephenson, C. Tague, M. Zeppel (2015). Tree mortality from drought, insects, and their interactions in a changing climate. *New Phytologist*. 208: 674-683
 - Reviewed in Faculty of 1000
28. Ballantyne, A.P., L.A. Cooper, R. Andres, P. Tans, J.C. Miller, C. Alden, J.W.C. White, G. Marland, R.A. Houghton, B. Stocker, R. Wanninkhof, **W.R.L. Anderegg**, M. DeGrandpre (2015). Audit of the Global Carbon Budget: Estimating errors and their impact on uptake uncertainty. *Biogeosciences*. 12: 2565-2584
27. **Anderegg, W. R. L.** (2015). Spatial and temporal variation in plant hydraulic traits and their relevance for climate change impacts on vegetation. *New Phytologist*. 205: 1008-1014
 - Winner of the New Phytologist Tansley Medal for outstanding contribution to plant sciences
26. Hartmann, H., H.D. Adams, **W.R.L. Anderegg**, S. Jansen, and M. Zeppel (2015). Research frontiers in drought-induced tree mortality: crossing scales and disciplines. *New Phytologist*. 205: 965-969.
25. **Anderegg, W. R. L.**, E. Callaway, M. Boykoff, G. Yohe and T. Root (2014). Awareness of both type I and II errors in climate science and assessment. *Bulletin of the American Meteorological Society*. 95: 1445–1451
24. Huang, C.Y., and **W.R.L. Anderegg** (2014). Vegetation and surface brightness dynamics after aspen forest die-off. *Journal of Geophysical Research*. 119: 1297-1308
23. **Anderegg, W. R. L.**, L.D.L. Anderegg, J.A. Berry, and C.B. Field (2014). Loss of whole-tree hydraulic conductance during severe drought and multi-year forest die-off. *Oecologia*. 175: 11-23
22. **Anderegg, W.R.L.**, and G. Goldsmith (2014). Public interest in climate change over the past decade and the effects of the ‘climategate’ media event. *Environmental Research Letters*. 054005: 1-8
21. **Anderegg, W. R. L.**, J. Kane, and L.D.L. Anderegg (2013). Consequences of widespread tree mortality triggered by drought and temperature stress. *Nature Climate Change*. 3: 30–36
 - Reported by: Huffington Post, New York Times, Climate Central, Voice of America
20. **Anderegg, W.R.L.**, L. Plavcova, L.D.L. Anderegg, U. Hacke, J. A. Berry, and C.B. Field (2013). Drought’s legacy: Hydraulic deterioration underlies widespread aspen die-off and portends increased future vulnerability. *Global Change Biology*. 19: 1188–1196
 - Reviewed in Faculty of 1000
19. Anderegg, L.D.L.*, **W.R.L. Anderegg***, J. Abatzoglou, A. Hausladen, and J.A. Berry (2013). Drought characteristics' role in widespread aspen forest mortality across Colorado, USA. *Global Change Biology*. 19: 1526–1537 *Contributed equally
18. **Anderegg, W. R. L.** and L.D.L. Anderegg (2013). Hydraulic and carbohydrate changes in experimental drought-induced mortality of saplings in two conifer species. *Tree Physiology*. 33: 252-260
17. Anderegg, L.D.L., **W.R.L. Anderegg**, and J.A. Berry (2013). Not all droughts are created equal: translating meteorological drought into woody plant mortality. *Tree Physiology*. 33: 701-712

16. **Anderegg, W.R.L.**, J. A. Berry, D.D. Smith, J.S. Sperry, L.D.L. Anderegg, and C.B. Field (2012). The role of hydraulic and carbon stress in a widespread climate-induced forest die-off. *Proceedings of the National Academy of Sciences*. 109: 233-237.
 - Reported by: New York Times, Salt Lake City KSL News, High Country News, Utah Public Radio
 - Reviewed in Faculty of 1000
15. Huang, C., and **W.R.L. Anderegg** (2012). Large drought-induced aboveground live biomass losses in southern Rocky Mountain aspen forests. *Global Change Biology*. 18: 1016–1027
14. **Anderegg, W.R.L.** (2012) Complex aspen forest carbon and root dynamics during drought. *Climatic Change Letters*. 111: 983-991
13. **Anderegg, W.R.L.** and E.S. Callaway (2012). Infestation and hydraulic consequences of induced carbon starvation. *Plant Physiology*. 159: 1866-1874
12. **Anderegg, W. R. L.**, L.D.L. Anderegg, C. Sherman, and D. Karp (2012). Widespread aspen mortality alters understory plant communities. *Conservation Biology*. 26(6):1082-90
11. **Anderegg, W. R. L.**, J. A. Berry, C.B. Field (2012). Linking definitions, mechanisms, and modeling of drought-induced tree death. *Trends in Plant Science*. 17(12): 693-700
10. Zeppel, M., **W.R.L. Anderegg**, and Adams, H.D. (2012). Forest mortality due to drought: latest insights, evidence and unresolved questions on physiological pathways and consequences of tree death. *New Phytologist*. 197(2): 372-374.
9. Wolf, A., **W.R.L. Anderegg**, S.J. Ryan, and J.A. Christensen (2011). Robust Detection of Plant Species Range Shifts Under Biased Sampling Regimes. *Ecosphere*. 2(10):115.
8. Wolf, A., and **W.R.L. Anderegg** (2011). Technical Comment on Changes in Climatic Water Balance Drive Downhill Shifts in Plant Species' Optimum Elevations. *Science* 334, 177.
7. Zeppel, M., Adams, H.D., and **W.R.L. Anderegg** (2011). Mechanistic causes of tree drought mortality: recent results, unresolved questions and future research needs. *New Phytologist*. 192:800-803
6. **Anderegg, W.R.L.**, J.W. Prall, and J. Harold (2010). Reply to Bodenstern: Contextual data about the relative scale of opposing scientific communities. *Proceedings of the National Academy of Sciences*. 107: E158
5. **Anderegg, W.R.L.**, J.W. Prall, and J. Harold (2010). Reply to Aarstad: Risk management versus “truth.” *Proceedings of the National Academy of Sciences*. 107: E154.
4. **Anderegg, W.R.L.**, J.W. Prall, and J. Harold (2010). Reply to O’Neill & Boykoff: Objective classification of climate experts. *Proceedings of the National Academy of Sciences*. 107: E152
3. **Anderegg, W.R.L.**, J.W. Prall, J. Harold, and S.H. Schneider (2010). Expert credibility in climate change. *Proceedings of the National Academy of Sciences*. 107: 12107-12110.
 - Reported by: Science, Time, Scientific American, BBC, The Guardian, USA Today, New York Times
 - Top 50 Most-Read Papers, PNAS, June 2010 – December 2012
2. **Anderegg, W.R.L.** (2010) The Ivory Lighthouse: Communicating climate change effectively. *Climatic Change*. 101:655–662

1. **Anderegg, W.R.L.** (2010) Moving Beyond Scientific Agreement. *Climatic Change*. 101:331–3377

BOOK CHAPTERS

Anderegg, W.R.L. and F.C. Meinzer (2015). Wood anatomy and plant hydraulics in a changing climate. *In* Functional and Ecological Xylem Anatomy. Springer. Ed U. Hack. Springer Publishing.

AWARDS

2023 Alan T. Waterman Award, National Science Foundation

2023 National Laureate in Life Sciences, Blavatnik Awards for Young Scientists, Blavatnik Family Foundation

2023 Career Champion Award, Career & Professional Development Center, University of Utah

2021 CAREER Award, National Science Foundation

2019-present Web of Science, Clarivate Analytics, Global Highly Cited Researcher

2018 Packard Foundation Fellow for Science and Engineering

2018 Early Career Fellow of the Ecological Society of America (2018-2022)

2016 Early Career Award, American Geophysical Union – Global Environmental Change Focus Group. Awarded to an early career scientist for outstanding contributions to research, education, or societal impacts in the area of global environmental change.

2016 Winner – Blavatnik Regional Award for Young Scientists. Awarded annually to top postdoctoral researcher in life sciences from New York, New Jersey, and Connecticut.

2014 Tansley Medal, New Phytologist Trust. International award for outstanding contributions to plant science research by an early career scholar.

2013 NOAA Climate and Global Change Postdoctoral Fellowship

2012 Melendez Wright Climate Change Fellowship, National Park Service, Declined

2011 Excellence in the Academy Award – New Scholar, National Education Association

2010 Graduate Research Fellowship (GRF), National Science Foundation (NSF), Declined

2010 Office of Science Graduate Fellowship (SCGF), Department of Energy (DOE)

GRANTS (Total: ~\$15.1 million as PI or Co-PI, 9.7\$ million to UU)

		Amount
2023 – 2028	Alan T. Waterman Award, NSF	\$1,000,000
2023 – 2028	NSF Global Centers (Co-PI): U.S.-Canada Center on Climate-Resilient Western Interconnected Grid (\$2.5M to UU)	\$5,000,000

2021 – 2026	NSF CAREER Award (PI): CAREER: Illuminating how plant water-use strategies mediate ecosystem response to multiple climate extremes	\$821,000
2020 – 2024	NSF Division of Environmental Biology (Co-PI): Collaborative Proposal: Predicting ecosystem resilience to climate and disturbance events with a multi-scale hydraulic trait framework (PI: A Trugman, UC Santa Barbara)	\$1,500,000
2019 – 2023	USDA Environmental Monitoring (PI): Why is the hardiest tree in the southwest dying: Quantifying the physiology, etiology, and topographic patterns of juniper mortality in the Four Corners region under climate change	\$150,000
2018 – 2024	Packard Foundation Fellowship (PI): Predicting the future of Earth’s forests in a rapidly changing climate	\$875,000
2018 – 2022	NSF Division of Environmental Biology (Co-PI): Collaborative Proposal: Forest carbon-water interactions in relation to the North American Monsoon climate system Predicting the future of Earth’s forests (PI: R. Monson, U Arizona)	\$1,460,000
2018 – 2022	NSF MacroSystems Biology (Co-PI): Leveraging NEON to Build a Predictive Cross-scale Theory of Ecosystem Transpiration (PI: G. Bowen, U Utah)	\$1,870,000
2018 – 2023	USDA National Institute of Food and Agriculture (PI): Can diversity of tree drought response traits improve productivity and sustainability of western US forests and their ecosystem services?	\$500,000
2017 – 2021	NSF Coupled Natural-Human Systems (Co-PI/Co-lead with B. Coddling): Climate change, ecosystem dynamics, and traditional livelihoods in Utah piñon-juniper woodlands	\$1,470,000
2015 – 2018	NSF Integrated Organismal Systems (Collaborator/Senior Personnel): Integrating plant hydraulics with climate and hydrology to understand and predict responses to climate change (PI: J. Sperry, U Utah)	\$661,000
2015 – 2016	NSF DEB (Collaborator/Senior Personnel): EAGER-NEON: Detecting disturbance and ecosystem response in continental observatory networks (PI: A. Ballantyne, U Montana)	\$300,000
2014 – 2016	NSF Macrosystems (PI): Extreme events and ecological acclimation: Scaling from cells to ecosystems	\$500,000
2013 – 2015	NOAA Climate and Global Change Postdoctoral Fellowship	\$140,000
2012 – 2014	NSF RAPID (lead): Using open-source ecology to examine tree physiological response and mortality across species during the 2012 United States drought	\$100,000

TEACHING

Course Instructor University of Utah, Biology 3461: Diversity and Justice in Global Environmental Challenges (2021-present)

Course Instructor University of Utah, Biology 3460: Global Environmental Issues (2017-present)

Course Instructor University of Utah, Biology 7810: Scientific Speaking (2019-2020)

Lectures University of Utah: Biology of Variation, Biology in the 21st Century, Introduction to Environmental Studies and Sustainability, Advanced Research Topics in Ecology and Evolution, ACCESS Summer Institute, Energy and Society, Plant Ecology in a Changing World, Graduate Bootcamp, Ecology of Residency: Field Methods in Environmental Humanities, Global Changes and Society (2016-present)

Course Instructor Stanford University, Biology 323: California Plant Ranges with 20th Century Climate Change Graduate Seminar. (2010)

TRAINING AND MENTORSHIP

Current and previous postdoctoral researchers:

<u>Name</u>	<u>Time</u>	<u>Departed for</u>
Grayson Badgely	2019-2020	Postdoc, Columbia Univ.
Libby Blanchard	2023-present	
Antoine Cabon	2020-2023	Swiss NSF Postdoc Fellowship
Richard Fiorella (jointly mentored with J. Ehleringer)	2018-2021	Presidential postdoc, LANL
Steven Kannenberg (jointly mentored with J. Ehleringer)	2018-2022	Asst Prof, West Virginia Univ
Meng Liu	2022-present	
Xiaonan Tai (jointly mentored with P. Brooks and J. Sperry)	2018-2020	Asst Prof, New Jersey Inst Tech
Anna Trugman	2017-2019	Asst Prof, UC Santa Barbara
German Vargas	2021-present	
Martin Venturas	2018-2021	Marie Curie Fellow, Spain
Chao Wu	2021-present	
Linqing Yang	2022-present	
Kailiang Yu	2017	Postdoc, ETZ Zurich
Cedric Zahnd	2023-present	

Previous graduate students:

Coleson Kastelic	MS in 2021	US Forest Service
Kelly Kerr	Ph.D. in 2022	Postdoc, UC Santa Barbara
Nicole Zenes	Ph.D. in 2022	NOAA Research Associate

Current graduate students: Jaycie Fickle (Ph.D. student in Ecology, Evolution & Organismal Biology, 2020-present), Annapurna Post-Leon (Ph.D. student in Ecology, Evolution & Organismal Biology, 2021-present), Tegan Lengyel (Ph.D. student in Ecology, Evolution & Organismal Biology, 2023-present)

Graduate committees: Bryce Alex (MS, Biology), Vanessa Bailey (Ph.D., Geography), Antoine Cabon (Ph.D. Autonomous University of Barcelona, Spain), Michelle Donohue (Ph.D., English), J.P. Gasser (Ph.D. English), Andrew Gelderloos (MS, Hydrology), Kyle Kittleberg (Ph.D. Biology), Amanda Leibrecht (Ph.D. University of New Mexico), Monte Neate-Clegg (Ph.D. Biology), Xavier Serra-Maluquer (Ph.D., Instituto Pirenaico de Ecología, Spain), Yujie Wang (Ph.D. Biology)

Current and previous undergraduate students: Shams Al-shawbaki, Bryce Alex, Kristin Armstrong, Mary Beninati, Beth Blattenberg, Sophia Byusse, Jaycee Cappaeart, Lillie Congram, Will Dischmann, Megan DuVal, Anna Fowles, Robert Gabbitas, Julia Galecki, Shelby Jenkins, Sarah Johnson, Emily Johnston, Coleson Kastelic,

Derek Kober, Michaela Lemen, Katya Lewis, Marco Castenada Martinez, Ainsley Nystrom, Rosanise O'Dell, April Radford, Bitia Robles, Elizabeth Schattle, Karrin Tennant, Hailey Wells, Charity Zitting

SELECTED INVITED PRESENTATIONS

Exploring the future of Earth's forests under climate change. Invited seminar at Notre Dame University, November 2023.

Understanding the future of Earth's forests in a rapidly changing climate. **Invited Keynote** at the Autonomous University of Barcelona, June 2023.

Illuminating the climate risks to Earth's forests in the 21st century. Invited seminar at Cambridge University, October 2022.

A climate risk analysis of Earth's forests in the 21st century. Invited seminar at CREAM/Autonomous University of Barcelona, September 2022.

Cutting-edge science for nature-based climate solutions. Invited presentation at Oxford University, July 2022.

Cutting-edge science for nature-based climate solutions. Invited presentation at Ameriflux sponsored workshop for federal agencies, Washington DC, June 2022.

Climate-sensitive risks to US and global forest carbon. Invited presentation at the Carbon Mitigation Initiative annual meeting. London, UK. April 2022.

Leveraging physiology and ecology to understand the future of forests under climate change. Invited seminar at Clemson University, September 2021

Towards rigorous nature-based climate solutions. Invited presentation at the Fuller Symposium, World Wildlife Fund, May 2021

Divergent impacts of multiple droughts on forests. Invited presentation at the ESA Annual Meeting, Salt Lake City, UT, August 2020.

Revealing drought responses of forests through functional traits and hydraulic models. Invited presentation at the University of Basel, Basel Switzerland, June 2020 [canceled due to Covid-19].

The future of semi-arid forests in a rapidly changing climate. Invited presentation at the University of Alcala, Madrid, Spain, May 2020 [canceled due to Covid-19].

Plant functional traits influence land-atmosphere interactions and drought intensification. Invited speaker at the AGU Annual Meeting, San Francisco, CA, December 2019.

Leveraging plant physiology to improve carbon cycle projections. Invited speaker at the AGU Annual Meeting, San Francisco, CA, December 2019.

The carbon cycle consequences of multiple drought events. Invited speaker at the AGU Chapman Conference on Carbon Cycle Feedbacks, Caltech, August 2019.

Predicting multi-scale forest responses to drought. Invited speaker at the Program in Ecology, Duke University, January 2019.

Linking stomata and plant hydraulics to predict forest responses to drought. Invited presentation at Gordon Research Conference: Multiscale Vascular Plant Biology, Mount Snow, VT, June 2018.

Quantifying carbon turnover time in forest inventory, satellite, and Earth system model data. Invited presentation at the European Geophysical Union annual meeting, April 2018.

Can plant diversity buffer ecosystem response to drought? Invited presentation at the American Geophysical Union annual meeting, December 2017.

Optimal stomatal control aims to manage hydraulic damage. Invited presentation at the American Geophysical Union annual meeting, December 2017.

Forest hydraulic diversity and climate change. **Invited Keynote** at the Inauguration of the Swiss Forest Lab, Zurich, Switzerland, September 2017.

Linking stomata and plant hydraulics to predict plant responses to drought. Invited presentation at the New Phytologist Next Generation Plant Scientists Symposium, Norwich, UK, July 2017.

Towards a global forest mortality monitoring network: Lessons from physiology. **Invited Keynote** at the Volkswagen Foundation Mortality Symposium, Hanover, Germany, June 2017.

UNREFEREED PUBLICATIONS

Great Salt Lake Strike Team. Great Salt Lake Policy Assessment. <<https://wilkescenter.utah.edu/home/great-salt-lake-strike-team/>> February 2023.

Anderegg, W.R.L. Wildfires are white-hot signs of climate change in our backyard. *Denver Post*, Op-Ed. July 2018

Anderegg, W.R.L. When Forests Die: Climate Change and Our Heritage. *Hatch Magazine*, July 2017

Anderegg, W.R.L. Predictable Futures. *Analog: Science Fiction and Fact*, September 2014

Anderegg, W.R.L. Diagnosis Earth: The Climate Change Debate. *Thought and Action: Magazine of the Higher Education Association*, Fall 2010

- Awarded Excellence in the Academy Award for New Scholar by the National Education Association

Anderegg, W.R.L. Biosphere. In *The Encyclopedia of Climate and Weather*, Oxford University Press, 2010.

Anderegg, W.R.L. Good night, sweet trees: aspens, climate change, and the future of western forests. *High Country News*, March 1, 2010

Anderegg, W.R.L. and J. Harold. Climate science and the dynamics of expert consensus. *Stanford Center for Conservation Biology*, 2009.

<http://www.stanford.edu/group/CCB/articles/Anderegg_ClimateConsensus_Report2009.pdf>

SELECTED SERVICE

2024-present Executive Committee, Responsible AI Initiative at the University of UTah

2023-present Editor, *Ecology Letters*

2022-present Co-Chair, Great Salt Lake Strike Team

2021-2023 Technical Contributor, Air Quality Chapter, U.S. National Climate Assessment

2020, 2022 Climate change module, STEM Community Alliance Project (STEMCAP), climate change presentation, activities, discussion in juvenile detention center, Farmington, Utah

2020-2023 Faculty Search Committees – Molecular biology, plant molecular biology, plant ecology, plant physiology, climate science and impacts (Co-Chair in 2021-2022, and 2023-2024)

2020 Organizer, Emerging Frontiers in Plant Biology, Symposium at the University of Utah

2019-2020 Search Committee for the Director of the School of Biological Sciences

2018-2019 Executive Committee of the Global Change and Sustainability Center at the University of Utah

2018-2020 Contributing Author, Intergovernmental Panel on Climate Change (IPCC), Special Report on Climate Change and Land
Chapter 2: Land-Climate Interactions

2017-2019 Co-Organizer, American Geophysical Union, Annual Meeting, Organized Oral Sessions related to plant hydraulics, drought stress, and Earth system models

2017-present Executive Committee, Society, Water, and Climate Research Group, University of Utah

2017 Panelist at “Warming Up to Climate Change: Risks and Opportunities in Utah: A Seminar for Utah Opinion Leaders.” Event for Utah and federal policy-makers.

2016-present Associate Deputy Editor, *Climatic Change*

2016 Search Committee, Society, Water, and Climate Cluster Hires, University of Utah.

2014 Co-Organizer, International Interdisciplinary Tree Mortality Workshop, Jena, Germany

2014 Co-Organizer, Ecological Society of America, Organized Oral Session: Physiological mechanisms, patterns, and modeling of drought-induced tree mortality

2013 Primary Organizer, Ecological Society of America, Organized Oral Session: Modeling drought and insect-induced tree mortality

2013 Primary Organizer, National Center for Ecological Analysis and Synthesis, Frontiers in modeling drought and insect-induced tree mortality working group

2011 – 2014 Chapter Scientist, Intergovernmental Panel on Climate Change (IPCC), Working Group II
Chapter 26: North America

2011 – 2014 Contributing Author, Intergovernmental Panel on Climate Change (IPCC), Working Group II
Chapter 4: Ecosystems
Chapter 26: North America

Co-Organizer: Drought Open-Source Ecology project – a collaborative research coordination involving >50 research groups around the US to look at the impacts of the severe summer 2012 drought on forests; funded by NSF RAPID.

Reviewer: Advances in Water Resources, American Naturalist, Animal Conservation, Biogeosciences, BioScience, Bulletin of the American Meteorological Society, Canadian Journal of Forest Research, Climatic Change, Ecology, Ecology Letters, Ecological Applications, Ecosphere, Ecosystems, Environmental Management, Environmental Research Letters, Functional Ecology, Geophysical Research Letters, Global Change Biology, Global Ecology and Biogeography, Journal of Advances in Modeling Earth Systems, Journal of Geophysical Research, Journal of Applied Meteorology and Climatology, Nature, Nature Climate Change, Nature Geoscience, New Phytologist, Oikos, Plant, Cell & Environment, Plants, PLoS Biology, PLoS Climate, PLoS One, Proceedings of the Royal Society – Series B, Proceedings of the National Academy of Sciences, Science, Tree Physiology, Trees, Water Resources Research