

Dr. Valérie Trouet

Associate Professor in Dendrochronology

Laboratory for Tree-Ring Research

University of Arizona

1215 E Lowell Street

Tucson AZ 85721

PHONE (+1) 520-626-8004 FAX (+1) 520-621-8229

E-MAIL trouet@lrr.arizona.edu

<http://www.trouetlab.com>

August 2016

CHRONOLOGY OF EDUCATION

Ghent University, Belgium	Bioscience Engineering	BSc, 1997
Ghent University, Belgium	Bioscience Engineering: Land Management and Forestry; Major in soil and water management	MEng, 1999
KULeuven, Belgium	Bioscience Engineering	PhD, 2004
PennState University	Geography	Postdoc, 2005-2006

CHRONOLOGY OF EMPLOYMENT

2015-Present	Associate Professor , University of Arizona, Laboratory of Tree-Ring Research Joint position in UA School of Natural Resources and Environment Joint position in UA Department of Geosciences
2011-2015	Assistant Professor , University of Arizona, Laboratory of Tree-Ring Research and School of Natural Resources and Environment
2007- 2010	Research Scientist , the Swiss Federal Research Institute for Forest, Snow, and Landscape WSL (ETH domain), Dendro Sciences Research Unit
2005 – 2006	Post-Doctoral Research Associate , The Pennsylvania State University, Department of Geography, Vegetation Dynamics Laboratory.
2000 – 2003	Doctoral Research Fellow , Institute for the Promotion of Innovation by Science and Technology in Flanders

HONORS AND AWARDS

2014	National Science Foundation (NSF) CAREER Grant
2008	Young Scientist Travel Award , European Meteorological Society
2000	Doctoral Research Fellowship , Institute for the Promotion of Innovation by Science and Technology in Flanders
1999	Development Cooperation Prize , Belgian Development Cooperation

PEER-REVIEWED PUBLICATIONS (PUBLISHED OR ACCEPTED)

Underlined author is a student or post-doctoral advisee.

H-index: 19 (ISI) and 23 (Google Scholar)

Total citations: 1602 (ISI) and 2680 (Google Scholar)

Citations without self-citation: 1509 (ISI)

<https://scholar.google.com/citations?user=-hF1HN8AAAAJ&hl=en>

Peer-reviewed journal articles

43. Szejner P, Wright WE, Babst F, Belmecheri S, **Trouet V**, Leavitt SW, Ehleringer JR, Monson RK (2016) Latitudinal gradients in tree-ring stable carbon and oxygen isotopes reveal differential climate influences of the North American Monsoon system. ***Journal of Geophysical Research - Biogeosciences*** doi:10.1002/2016JG003460

42. Charney ND, Babst F, Poulter B, Record S, **Trouet V**, Frank D, Enquist BJ, Evans MEK (2016) Observed forest sensitivity to climate implies larger reductions in 21st century forest growth. ***Ecology Letters*** doi: 10.1111/ele.12650

41. Esper J, Krusic PJ, Ljungqvist F, Luterbacher J, Carrer M, Cook ER, Davi NK, Hartl-Meier C, Kirilyanov A, Konter O, Myglan V, Timonen M, Treydte K, **Trouet V**, Villalba R, Wilson RS, Yang B, Büntgen U (2016) Review of tree-ring based temperature reconstructions of the past millennium. ***Quaternary Science Reviews*** 145: 134-151.

40. O'Donnell A, Allen K, Evans R, Cook ER, **Trouet V**, Baker PJ (2016) Wood density provides new opportunities for reconstructing past temperature variability from southeastern Australian trees. ***Global and Planetary Change*** 141: 1-11

39. Black BA, Griffin D, Van der Sleen P, Wanamaker AD, Speer JH, Frank DC, Stahle DW, Pederson N, Copenheaver CA, **Trouet V**, Griffin S, Gillanders BM (2016) The value of crossdating to retain high-frequency variability, climate signals, and extreme events in environmental proxies. ***Global Change Biology*** 22: 2582-2595.

38. **Trouet V**, Harley G, Dominguez-Delmas M (2016) Shipwreck rates reveal Caribbean tropical cyclone response to past radiative forcing. ***Proceedings of the National Academy of Sciences*** 113: 3169-3174.

37. Cook ER and 55 co-authors including **Trouet V** (2015) Old World megadroughts and pluvials during the Common Era, ***Science Advances*** doi:10.1126/sciadv.1200561

36. Belmecheri S, Babst F, Wahl ER, Stahle DW, **Trouet V** (2015) Multi-century evaluation of Sierra Nevada snowpack. ***Nature Climate Change*** doi:10.1038/nclimate2809: *Most read Nature Climate Change publication (09/28/2015)*

35. Baker A, Hellstrom J, Kelly BFJ, Mariethoz G, **Trouet V** (2015) A composite annual-resolution stalagmite record of North Atlantic climate over the last three millennia. ***Scientific Reports*** DOI: 10.1038/srep10307

34. Dawson A, Austin D, Walker D, Appleton A, Gillanders BM, Griffin SM, Sakata C, **Trouet V** (2015) A tree-ring based reconstruction of early summer precipitation in southwestern Virginia (1750-1981). ***Climate Research*** 64, 243-256.

33. **Trouet V** (2015) A tree-ring based late summer temperature reconstruction (1675-1980) for the northeastern Mediterranean. ***Tree-Ring Research/Radiocarbon*** 56, 69-78.

32. Klesse S, Ziehmer M, Rousakis G, **Trouet V**, Frank D (2015) Synoptic drivers of 400 years of summer temperature and precipitation variability on Mt. Olympus, Greece ***Climate Dynamics*** 45, 807-824.

31. Babst F, Alexander MR, Moore DJ, Frank DC, Klesse S, Bouriaud O, Poulter B, Ciais P, Roden J, **Trouet V** (2014) A tree-ring perspective on the terrestrial carbon cycle. *Oecologia* DOI 10.1007/s00442-014-3031-6
30. Seim A, Treydte K, **Trouet V**, Frank D, Fonti P, Tegel W, Panayotov M, Fernandez Donado L, Büntgen U (2015) Climate sensitivity of Mediterranean pine growth reveals a distinct west-east dipole structure. *IJ Climatology* DOI: 10.1002/joc.4137
29. Babst F, Bouriaud O, Alexander MR, **Trouet V**, Frank D (2014) Biomass estimates from tree rings: A case study at five managed forest sites. *Dendrochronologia* 32, 153-161.
28. **Trouet V**, Diaz HF, Wahl ER, Viau AE, Cook ER (2013) A 1500-year reconstruction of annual mean temperature for temperate North America on decadal-to-multidecadal time-scales. *Environmental Research Letters* DOI 10.1088/1748-9326/8/2/024008
27. PAGES2K consortium (including **Trouet V**) (2013) Temperature variability at the continental scale over two millennia. *Nature Geoscience* DOI 10.1038/NGE01797
26. De Ridder M, **Trouet V**, Van den Bulcke J, Hubau W, Van Acker J, Beeckman H (2013) A tree-ring based comparison of *Terminalia superba* climate-growth relationships in West and Central Africa. *Trees – Structure and Function* DOI 10.1007/s00468-013-0871-3
25. **Trouet V**, Van Oldenborgh GJ (2013) KNMI Climate Explorer: a web-based research tool for high-resolution paleoclimatology. *Tree-Ring Research* 69(1): 3-13.
24. Babst F, Poulter B, **Trouet V**, Kun T, Neuwirth B, Wilson R, Carrer M, Grabner M, Tegel W, Levanić T, Panayotov M, Urbinati C, Bouriaud O, Ciais P, Frank D (2012) Climatic drivers of forest productivity derived from 1000 sites in Europe. *Global Ecology and Biogeography* DOI: 10.1111/geb.12023 Top cited 2013-2014 GEB paper
23. ***Trouet V**, Mukelabai M, Verheyden A, Beeckman H (2012) Cambial growth season of brevi-deciduous *Brachystegia spiciformis* trees from South Central Africa restricted to four months. *PLoS ONE* 7(10): e47364. DOI:10.1371/journal.pone.0047364
22. Seim A, Büntgen U, Fonti P, Haska H, Herzig F, Tegel W, **Trouet V**, Treydte K (2012) The paleoclimatic value of a millennium-long tree-ring chronology from Albania. *Climate Research* DOI: 10.3354/cr01076
21. **Trouet V**, Panayotov M, Ivanova A, Frank DC (2012) A pan-European summer teleconnection mode revealed by a new temperature reconstruction from the northeastern Mediterranean (1868-2008). *The Holocene* DOI: 10.1177/0959683611434225
20. **Trouet V**, Scourse JD, Raible CC (2012) North Atlantic storminess and Atlantic Meridional Overturning Circulation in the last Millennium: reconciling contradictory proxy records of NAO variability. *Global and Planetary Change* DOI 10.1016/j.gloplacha.2011.10.003 Most cited publication in Global and Planetary Change in 2012
19. Baker A, Wilson R, Fairchild I, Franke J, Spoetl C, **Trouet V** (2011) High resolution $\delta^{18}O$ and $\delta^{13}C$ records of the last millennium climate from an annually laminated Scottish stalagmite. *Global and Planetary Change* DOI: 10.1016/j.gloplacha.2010.12.007
18. Büntgen U, Tegel W, Nicolussi K, McCormick M, Frank D, **Trouet V**, et al. (2011) 2500 years of European climate variability and human susceptibility. *Science* DOI: 10.1126/science.1197175 recommended for Faculty of 1000 by Douglas Erwin
17. ***Trouet V**, Esper J, Beeckman H (2010) Climate/growth relationships of *Brachystegia spiciformis* from the Miombo woodland in southern Africa. *Dendrochronologia* DOI: 10.1016/j.dendro.2009.10.002

16. **Trouet V**, Taylor AH (2010) Multi-century variability in the Pacific North American (PNA) circulation pattern reconstructed from tree rings. *Climate Dynamics* DOI:10.1007/s00382-009-0605-9
15. **Trouet V**, Taylor AH, Wahl ER, Skinner CN, Stephens SL (2010) Fire-climate interactions in the American West since 1400 CE. *Geophysical Research Letters* DOI:10.1029/2009GL041695
14. Büntgen U, Frank D, **Trouet V**, Esper J (2010) Diverse growth trends and climate responses of high-elevation Mediterranean tree-ring width and density. *Trees – Structure and Function* DOI:10.1007/s00468-009-0396-y
13. Büntgen U, **Trouet V**, Leuschner HH, Frank D, Friedrichs D, Esper J (2010) A tree ring-based summer drought reconstruction for Central Germany reveals evidence of the Medieval Climate Anomaly. *Quaternary Science Reviews* DOI: 10.1016/j.quascirev.2010.01.003
12. Frank D, Esper J, Raible C, Büntgen U, **Trouet V**, Joos F (2010) Ensemble temperature reconstruction constraints on CO₂ feedbacks. *Nature* 463, 527-530, DOI: 10.1038/nature08769
11. Panayotov M, Bebi P, **Trouet V**, Yurukov S (2010) Climate signal in tree-ring chronologies of *Pinus peuce* and *Pinus heldreichii* from the Pirin Mountains in Bulgaria. *Trees – Structure and Function* 24, 479-490, DOI:10.1007/s00468-010-0416-y
10. **Trouet V**, Esper J, Graham NE, Baker A, Frank DC, Scourse JD (2009) Persistent positive North Atlantic Oscillation mode dominated the Medieval Climate Anomaly. *Science* 324, 78–80, DOI: 10.1126/science.1166349
9. **Trouet V**, Taylor AH, Carleton AM (2009) Interannual variations in fire weather, fire extent, and synoptic-scale circulation patterns in northern California and Oregon. *Theoretical and Applied Climatology* 95:349-360, DOI: 10.1007/s00704-008-0012-x.
8. Skinner CN, Abbott CS, Fry DL, Stephens SL, Taylor AH, **Trouet V** (2009) Variation in Fire Regime Characteristics in California's North Coast Range. *Fire Ecology* 5: 73-96, doi: 10.4996/fireecology.0503073
7. Friedrichs D, **Trouet V**, Büntgen U, Frank DC, Esper J, Neuwirth B, Löffler J (2009) Twentieth century climate sensitivity of Central European tree species. *Trees - Structure and Function* 23:729-739, DOI 10.1007/s00468-009-0315-2
6. Taylor AH, **Trouet V**, Skinner CN (2008). Climatic influences on fire regimes in montane forests in the southern Cascades, California, USA. *International Journal of Wildland Fire* 17:60-71.
5. Yuan Y, Shao X, Wei W, Yu S, Gong Y, **Trouet V** (2007) The potential to reconstruct Manasi River streamflow in the northern Tien Shan mountains (NW China). *Tree-Ring Research* 63, 81-93. 4th most cited Tree-Ring Research article 2013-2015
4. **Trouet V**, Taylor AH, Carleton AM, Skinner CN (2006) Fire-climate interactions in forests of the American Pacific Coast. *Geophysical Research Letters*, 33:L18704, doi:10.1029/2006GL027502.
3. ***Trouet V**, Coppin P, Beeckman H (2006) Annual ring patterns in Brachystegia Trees of the Miombo Woodland reveal climatic Influence. *Biotropica* 38(3): 375-382.
2. *Fichtler E, **Trouet V**, Beeckman H, Coppin P, Worbes M (2004) Climatic signals in tree rings of *Burkea africana* and *Pterocarpus angolensis* from semi-arid forests in Namibia. *Trees – Structure and Function* 18: 422-451.

1. ***Trouet V**, Haneca K, Coppin P, Beeckman H (2001) Tree ring analysis of *Brachystegia spiciformis* and *Isoberlinia tomentosa*: evaluation of the ENSO-signal in the miombo-woodland of eastern Africa. *IAWA Journal* 22: 385-399.

Selected other peer reviewed articles and book chapters

4. Diaz H, **Trouet V** (2014) Some Perspectives on Societal Impacts of Past Climatic Changes. *History Compass* 12(2):160-177.

3. **Trouet V** (2011) Paleoclimates. In: Mastrandrea, M., Schneider, S.,H. and Root, T.L. (Eds.), *The Encyclopedia of Climate and Weather*, Oxford University Press, 2nd edition, 391-394.

2. **Trouet V** (2011) Little Ice Age. In: Mastrandrea, M., Schneider, S.,H. and Root, T.L. (Eds.), *The Encyclopedia of Climate and Weather*, Oxford University Press, 2nd edition, 241-243.

1. **Trouet V**, Baker A (2009) Reconstructing climate dynamics over the last millennium. *EOS* 90 (33):283-284.

Papers in review

3. **Trouet V**, Dominguez-Delmas M, Pearson C, Pederson N, Rubino D (in review) “Dendro-archeo-ecology” in North America and Europe: Re-purposing Historical Materials to Study Ancient Human-Environment Interactions. In: Amoroso M, et al. (eds.) *Dendroecology: Tree-ring analyses applied to ecological studies*, Springer.

2. **Alexander MR**, Rollinson CR, **Babst F**, **Trouet V**, Moore DJP (in review) Uncertainty in tree-ring based biomass estimates does not alter growth-climate relationships. *Trees – Structure and Function*

1. Taylor AH, **Trouet V**, Skinner CN, Stephens SL (in revision) Socio-Ecological transitions trigger fire regime shifts and modulate fire-climate interactions in the Sierra Nevada, USA 1600-2015 CE. *Proceedings of the National Academy of Sciences*

MEDIA COVERAGE OF RESEARCH (SELECTED; 2011-PRESENT)

Our recent publications in *Nature Climate Change* (Belmecheri et al. 2016), *PNAS* (Trouet et al. 2016), and *Ecology Letters* (Charney et al. 2016) have received broad national and international media attention. Below is a selective list:

- <https://www.azpm.org/p/crawler-stories/2015/9/14/71951-ua-research-sierra-nevada-snowpack-lowest-in-500-years/>
- http://www.nytimes.com/2015/09/15/science/california-snow-report.html?_r=0
- <http://www.latimes.com/science/sciencenow/la-sci-sn-snowpack-20150911-story.html>
- <http://www.washingtonpost.com/news/energy-environment/wp/2015/09/14/scientists-say-its-been-500-years-since-california-was-this-dry/>
- <http://www.reuters.com/article/2015/09/14/us-environment-california-idUSKCN0RE1QQ20150914>
- <https://www.newscientist.com/article/dn28162-sierra-nevadas-500-year-snowpack-low-deepens-california-drought/>
- <http://news.nationalgeographic.com/2015/09/15914-Sierra-California-snowpack-mountains-drought-centuries/>
- <http://www.cbsnews.com/news/sierra-nevada-snowpack-lowest-in-500-years/>
- <http://www.theguardian.com/us-news/2015/sep/14/california-drought-sierra-nevada-snowpack-500-year-record-low>
- <http://www.popularmechanics.com/science/environment/a17323/californias-sierra-nevada-mountains-snowpack/>

- <https://theconversation.com/the-2015-sierra-nevada-snowpack-is-at-a-500-year-record-low-47380>
- <https://www.sciencenews.org/article/hurricane-frequency-dropped-during-17th-century-little-ice-age>
- <https://news.azpm.org/p/nature-news/2016/3/7/83426-tree-rings-spanish-shipwrecks-aid-in-hurricane-understanding/>
- http://elpais.com/elpais/2016/03/07/ciencia/1457344293_391236.html
- <https://www.washingtonpost.com/news/energy-environment/wp/2016/03/07/what-these-ancient-shipwrecks-could-be-telling-us-about-climate-change/>
- <https://www.insidehighered.com/quicktakes/2016/07/21/academic-minute-shipwrecks-tree-rings-and-hurricanes>
- <https://theconversation.com/shipwreck-records-and-tree-rings-unveil-caribbean-hurricane-history-and-clues-to-the-future-55730>
- <http://www.climatecentral.org/news/forests-not-climate-change-remedy-20549>
- <http://www.reuters.com/article/us-climatechange-forests-northamerica-idUSKCN1001MO>
- <http://www.newsweek.com/trees-wont-save-us-climate-change-north-america-global-warming-forests-482092>

Selected prior media coverage:

- Climatexus.org (January and December 2014), Telepressers, panellist on CA drought
- Video interview for NAU paleoclimate science documentary ‘Taking Earth’s temperature’ (Oct 2013): <http://takingearthstemperature.org/>
- stateimpact.npr.org/Texas (June 5, 2013), *High wildfire risk, longer fire season possible this year* (Holly Heinrich)
- [Environmentalresearchweb.org](http://environmentalresearchweb.org) (July 5, 2013), *Tree rings and pollen enable 1500-year temperature reconstruction* (Nadya Anscombe)
- Climatexus.org (June 2013), Telepresser, panellist on wildfire in the American West
- Arizona Daily Star (4 November 2012): *Laboratory in the sky* (Newspaper article about UA research on Mt Lemmon)
- New Scientist (2 April 2009) *Natural mechanism for medieval warming discovered* (Nora Schultz)
- Pour La Science (14 April 2009) *Le climat du Moyen Âge : entre cèdres marocains et grottes écossaises* (Loïc Mangin)

GRANTS AND CONTRACTS (2011-PRESENT)

Federal

Principal Investigator (PI): “Tree-ring based reconstruction of decadal to centennial-scale Northern Hemisphere Jetstream variability”; National Science Foundation (NSF) CAREER (587,442 USD; 05/15/2014-05/14/2019)

PI: “Tree-ring based reconstruction of Northern Hemisphere Jetstream variability”; NSF CAREER supplement (2,724 USD; 05/15/2016-09/15/2017)

PI: “Influence of interannual North Pacific Jet variability on Sierra Nevada Fire regimes”; US Geological Survey Southwest Climate Science Center (139,280 USD; 9/9/2013-9/8/2015); co-I: J Betancourt, USGS

Co-I: "Estimating carbon flux and storage: constraint of the Community Land Model using observations at different temporal scales"; Department of Energy DE-FOA-000749 (970,020 USD; 9/1/2013-8/31/2016); PI: D. Moore, co-Is: A. Arellano, V. Trouet, A. Richardson

Co-I: "Catalyzing International Partnerships in Community-related Environmental and Sustainability Research and Education: Ethical, Structural and Institutional Issues of Collaboration"; NSF (20,000 USD; 4/1/12-3/31/14);

Co-I: "Collaborative Research: Northwest African temperature variability over the last millennium based on Atlas cedar carbon isotopic tree-ring records"; NSF Paleo Perspectives on Climate Change (595,115 USD); PI: S. Belmecheri (PENDING)

State

PI: "Curriculum Development for two Interdisciplinary Courses: Global Change Analysis and Scientific Writing" UA College of Science (10,000 USD; 8/15/2016 -5/15/2017)

PI: "Influence of jet stream variability on North American landscape phenology" UA (Water Environment and Energy Solutions; 32,752 USD; 8/15/2016-5/15/2017); Co-I: D Moore, UA.

PI: "Dendroclimatic potential of *Widdringtonia cedarbergensis* trees in South Africa" UA (College of Science Seed Grant: 9,986 USD; 10/1/2015-9/30/2016)

PI: "Hydrologically-driven Spatial Heterogeneity of Tree Productivity and Tree Climate Sensitivity in the Southwest" UA (Water Environment and Energy Solutions; 39,994 USD; 7/1/2014-6/30/2013); Co-I: D Moore, UA

PI : "Spatial heterogeneity of tree growth sensitivity to climate in the Jemez River Basin Critical Zone Observatory" UA Sustainability of semi-Arid Hydrology and Riparian Areas (14,996 USD; 5/1/2012-6/30/2012)

PI: "Workshop: North American Dendroclimatic Data: Compilation, Characterization, and Spatiotemporal Analysis"; Past Global ChAnGES North America 2K (5,000 USD; 8/15/2011-10/31/2011)

Co-I: UA CONACYT " Historic hydroclimatic variability of the Baja California Peninsula, based on tree-ring widths and isotope analysis of *Pinus monophylla* and *Pinus lagunae*" (25,000 USD; 1/1/-12/31/2015) PI: S. Leavitt, J. Carriquiry

Co-I: UA TRIF Optics/Imaging special program (14,941 USD; 2/1/2011-3/1/2011) PI: M. Hughes

TEACHING (2011-PRESENT)

Courses

Spring 2011

Topics in Dendrochronology GEOS 595E

Fall 2011, 2012, 2014, 2015, 2016

Introduction to Dendrochronology GEOS 439A/539A

Spring 2012, 2013, 2014

Introduction to Global Change GC 170A

Fall 2012, 2013, Spring 2013, 2014, 2016

Renewable Natural Resources Seminar RNR 696A

Theses and dissertations directed as chair

- Zakia Hassan Khamisi, MS, School of Natural Resources and the Environment (SNRE), UA (March 2014)
- Robert Shepard, MS, SNRE, UA (2013-2015)
- Paul Szejner, PhD, SNRE, UA (2013-present); in progress
- Michael Ross Alexander, PhD, SNRE, UA (2012-present); in progress

- Amy Hudson, PhD, SNRE, UA (2015-present); in progress
- Matthew Meko, PhD, Geosciences, UA (2016-present); in progress
- Kashja Iler, MS, SNRE, UA (2016-present); in progress

Post-doctoral advisees:

- Flurin Babst (2013-2015)
- Soumaya Belmecheri (2015-2016)
- Genaro Gutierrez (Jan-Dec. 2015)
- Raquel Alvaro Sanchez (2016-2018)

Service on other dissertation and graduate committees

- Laura Marshall, PhD, SNRE, UA (2011-present); in progress
- Connor Nolan, PhD, Geosciences, UA (2013-present); in progress
- Rebecca Caroli, MS, Archeology, UA (2013-2015)
- Emily L Dynes, MS, SNRE, UA (2012-2015)
- Maaïke De Ridder, PhD, Applied Biological Sciences, Ghent University, Belgium (May 2013)
- Astika Bhugeloo, MSc, Geography, University of KwaZulu-Natal, South Africa (Spring 2014)
- Jesper Bjoerklund, PhD, Earth Sciences, University of Gothenburg, Sweden (June 2014)
- Vera De Cauwer, PhD, Applied Biological Sciences, Katholieke Universiteit Leuven, Belgium (September 2016)
- Clementine Ols, PhD, UQAT, Quebec, Canada (October 2016)

SERVICE/OUTREACH (2011-PRESENT)

Local/State

- 2015-2016: Member, Steering Committee for EDO cluster hire
- 2014-2015: Member, Search Committee for LTRR Director position
- 2012-2013: Co-chair of the Ameridendro programming committee (with Ron Towner)
- 2011-2012: Organizer, Tree-Ring Talk seminar series
- 2011: Member, Search Committee for Dendro-archeology faculty position
- June 2012: video interview about tree-ring research related to the fall of the Roman Empire for a film by Regents' Professor David Soren (School of Anthropology) on the topic: <http://vimeo.com/48419359>
- Marshall Foundation Jury Fall 2015
- 29 November 2012: NRGSO's Graduate Professional Development session on Career Planning; panel member (CALs)
- Global Change GIDP faculty member (2011-present)
- Arid Lands GIDP faculty member (2014-present)

National/International

Associate editor for Fire Ecology (2010-present)

AMQUA council member (2015-present)

Navareno Ecological Observatory (NEO) associate member (2015-present)

Reviewer for >40 ISI-listed journals:

Agricultural and Forest Meteorology, Biotropica, Canadian Journal of Forest Research, Climate Dynamics, Climate of the Past, Climate Research, Climatic Change,

Dendrochronologia, Ecology, Ecosystems, Earth and Planetary Science Letters, Fire Ecology, Forest Ecology and Management, Geografisker Annaler, Geology, Geophysical Research Letters, Global Change Biology, Global and Planetary Change, The Holocene, International Journal of Climatology, International Journal of Wildland Fire, Journal of Applied Meteorology and Climatology, Journal of Atmospheric and Solar-Terrestrial Physics, Journal of Climate, Journal of Ecology, Journal of Geophysical Research, Journal of Hydrology, Journal of Tropical Ecology, Land, **Nature**, **Nature Communications**, **Nature Geoscience** (*Recognized by Nature Publishing Group for refereeing 4 manuscripts in 2014*), PLoSOne, Population and Environment, Progress in Physical Geography, Quaternary Research, Quaternary Science Reviews, Radiocarbon, **Science**, **Science Advances**, Tree Physiology, Tree-Ring Research, Trees Structure and Function.

Reviewer for >10 national and international funding agencies:

ERC – European Research Council

FCT – Fundação para a Ciência e a Tecnologia (Portugal)

FFG – Austrian Research Promotion Agency (Austria)

FONDECYT – National Fund for Scientific and Technological Development (Chile)

Fonds de Recherche Nature et Technologies (Quebec)

FWO- Fonds voor Wetenschappelijk Onderzoek (Belgium)

NERC – Natural Environment Research Council (UK)

NOAA – Climate Change Data and Detection (CCDD) Program

NSERC – Natural Sciences and Engineering Research Council of Canada

NSF – National Science Foundation

- Integrative Organismal Systems
- Geography and Spatial Sciences
- Atmospheric and Geospace Sciences
- Arctic System Science Program
- Paleoclimate Program

NGS - National Geographic Society

NWO - Netherlands Organisation for Scientific Research

Professional memberships:

American Geophysical Union (AGU)

Association of American Geographers (AAG)

Association for Tree Ring Research (ATR)

Tree-Ring Society (TRS)

Conferences, workshops, and fieldweeks:

- 2nd American Dendrochronology Conference (13-17 May 2013, Tucson, AZ), **co-chair of the programming committee**
- PAGES NAM2K workshop (27-29 October 2011; Tucson, AZ), **convener**
- ESF exploratory workshop on synoptic-scale climate dynamics over the last millennium (17-20 May 2009; Kippel, CH). **Convener**
- 7th Symposium on Fire and Forest Meteorology (23-25 October 2007; Bar Harbor, ME). **Member of the programming committee.**
- AGU 2012-2016 Conference Session “*Constraining terrestrial ecosystem carbon uptake and storage using models and data*”, **convener**
- AGU 2015 Conference Session “*Hydroclimate and Atmospheric Circulation Patterns on Multidecadal to Millennial Timescales*”, **convener**
- AAG 2006, 2012 Conference Session “*Tropical Dendrochronology*”, **organizer**
- AGU 2012, 2013 outstanding student paper award judge

- AAG 2012 *Pyrogeography: Spatio-Temporal Variability in Fires and Fire Regimes*, session discussant
- AAG 2014 *Duelling Teleconnections: Implications for Paleoenvironmental Reconstruction*, session discussant (INVITED)
- Paleo-ecological Observation Network (PALEON) Annual Team meeting, Berkeley University, CA (2012, 2013, 2014), invited guest scientist.
- Department of Forest Resources and Environmental Conservation, Virginia Tech: A showcase of female scientists (13 March 2012, Blacksburg, VA), discussion panellist (INVITED)
- North American Dendroecological Fieldweek (2011, 2012), dendroclimatology instructor (INVITED)
- International Dendroecological Fieldweek (Tasmania, January 2014), dendroclimatology instructor (INVITED)
- ARAMACC summer school (Wales, UK, May 2014), instructor (INVITED)

SCHOLARLY PRESENTATIONS

University departmental seminars (invited only)

- **Department of Soil, Water, and Environmental Science, University of Arizona, Seminar series Spring 2016** (21 March 2016) *Tree-ring based reconstruction of Northern Hemisphere Jetstream variability and its ecosystem impacts*
- **Department of Geography, University of Arizona, Seminar series Spring 2016** (12 February 2016) *Shipwreck Rates Reveal Caribbean Tropical Cyclone Response to Past Solar Forcing*
- **Department of Geosciences, University of Arizona** (8 February 2016) *Tree-ring based reconstruction of Northern Hemisphere Jetstream variability and its ecosystem impacts*
- **Department of Atmospheric and Hydrological Sciences, University of Arizona, Seminar series Fall 2015** (29 October 2015) *Shipwreck rates reveal North Atlantic Tropical Cyclone Response to Past Radiative Forcing*
- **Physical Oceanography and Climate Change seminar series, University of Wales, Bangor (UK)** (21 May 2014), *Reconstructing the position of the North Atlantic Jet*
- **Laboratory of Tree-Ring Research, University of Arizona, Tree-Ring Talk series** (21 November 2012) *A Tree-Ring Based Reconstruction of Balkan Temperatures Back to Medieval Times Reveals a Robust Pan-European Summer Teleconnection Mode*
- **Research Insights in Semiarid Ecosystems (RISE) Symposium, University of Arizona** (13 October 2012) *Large-scale interactions of climate, fire and vegetation structure in the western US as observed through tree rings*
- **Department of Forest Resources and Environmental Conservation, Virginia Tech** (12 March 2012) *Fire-Climate Interactions in the American West*
- **Department of Atmospheric Sciences, University of Arizona, Seminar series Fall 2011** (3 November 2011) *Climate Dynamics during the Medieval Climate Anomaly.*
- **School of Geography and Development, University of Arizona, Speaker series Fall 2011** (30 September 2011) *Trees, Climate and History: What Tree-rings Can Tell Us About European History, Its Climate Drivers and How It's Linked to the Southwest*
- **Laboratory of Tree-Ring Research, University of Arizona, Tree-Ring Talk series** (27 April 2011) *Myth busters: can tropical trees form annual rings?*
- **Fire Sciences Laboratory, Rocky Mountain Research Station, USDA Forest Service, Missoula** (3 February 2011) *Fire-climate interactions in the American West*

- **Geographisches Institut, Johannes Gutenberg Universität, Mainz, Germany** (24 June 2010) *Long-term dynamics of the North Atlantic Oscillation*
- **Institutes of energy and the environment, The Pennsylvania State University** (2 April 2010) *Tree-ring based reconstruction of atmospheric circulation patterns*
- **INRA, Nancy, France** (4 March 2010) *Tree ring-based reconstruction of forest fire regimes, atmospheric circulation patterns, and their interactions*
- **IMEP, Aix-en-Provence, France** (2 December 2009) *Reconstructing atmospheric circulation patterns using tree ring analysis*
- **Centre d'Ecologie Fonctionnelle et Evolutive, CNRS, Montpellier, France** (25 February 2009) *Tree ring based reconstruction of atmospheric circulation patterns and their influence on natural fire regimes in the Western U.S.*
- **CEREGE, CNRS, Aix-en-Provence, France** (24 February 2009) *Tree ring based reconstruction of atmospheric circulation patterns and their influence on natural fire regimes in the Western U.S.*
- **IGDP in Ecology, The Pennsylvania State University** (11 September 2006) *Tree ring analysis of Zambezian miombo vegetation*

National and international conferences (invited only)

- **Kavli Frontiers of Science Symposium** (Irvine, CA, November 3-6 2016) *Invited speaker*
- **ESA annual meeting** (Baltimore, MD, August 10-14 2015) *A tree-ring perspective on terrestrial climate dynamics.*
- **XYLAREDD 2015 symposium** (Tervuren, Belgium, May 26-29 2015) *Climatic drivers of tree growth in the miombo woodland of southern Africa.*
- **MTNCLIM 2014 Conference, Cirmount** (Midway, UT, September 15-18 2014) *Reconstructing North Pacific Jet variability and its influence on Sierra Nevada fire regimes*
- **Center for the Ancient Mediterranean workshop, Columbia University** (NYC, NY, May 17 2014) *Potential pathways of climatic influence on the late Roman Empire*
- **AAG meeting** (Tampa, FL, April 6-12 2014) *Taking dendrochronology to the next level: reconstructing jet stream variability*
- **9th International Conference on Dendrochronology** (Melbourne, AUS, January 13-17 2014) *Climate Dynamics and European History*
- **PAGES NAM2K meeting** (Flagstaff, AZ, 8-10 May 2011) *Climate drivers of tree growth in Europe*
- **Eurodendro, Mallorca, Spain** (28 October 2009) *Keynote Lecture: Developments, advances, and challenges in dendroclimatology*
- **3rd Milestone Meeting of the Millennium Project, Mallorca, Spain** (3 March 2009) *Keynote Lecture: Persistent positive NAO mode dominated the Medieval Climate Anomaly*

LANGUAGES

	Mother tongue		
Dutch	<i>Understand</i>	<i>Speak</i>	<i>Write</i>
English	Excellent	Excellent	Excellent
German	Excellent	Excellent	Very good
French	Excellent	Very good	Very good
Spanish	Good	Moderate	Moderate