Feng Wang
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Citizenship: Chinese

RESEARCH INTERESTS

Dendrochronology, paleoclimatology, climate extremes, process-based models, forest ecosystems, terrestrial carbon dynamics, ecophysiology, dendroarchaeology.

EDUCATION

Ph.D. **Biology**, Université du Québec à Montréal-Université du Québec à Rimouski (UQAM-UQAR), Canada. 2016–2021.
Thesis title: *en français:* *Reconstitution millénaire des températures estivales de l'est de l'amérique du nord à partir de la densité maximale du bois final des cernes annuels de croissance des arbres.*
In English: Millennial reconstruction of eastern North American summer temperatures from maximum latewood density of annual tree rings.

M.S. **Wood Science and Technology**, Nanjing Forestry University, China. 2013–2015.
Thesis title: *中文:* 杉木年轮学初步研究。
In English: Tree-ring research of Chinese fir.

B.S. **Wood Science and Engineering**, Nanjing Forestry University, China. 2009–2013.

APPOINTMENTS

2024.11– **University of Iowa**, Iowa City, IA, United States
Postdoctoral researcher, School of Earth, Environment, and Sustainability (Dept. of Geographical and Sustainability Sciences)

2025.07– **University of Arizona**, Tucson, AZ, United States
Designated Campus Colleague (Visiting Researcher), Laboratory of Tree-Ring Research

2021.12–24.10 **Institut national de la recherche scientifique (INRS)**, Quebec, Canada
Postdoctoral researcher, Centre Eau Terre Environnement

2024.01–24.10 **Nanjing University**, Nanjing, China
Guest visiting researcher, Dept. of Geography and Ocean Sciences

FELLOWSHIPS

2025.01–25.03 **University of Arizona**, Tucson, United States
Agnese N. Haury Visiting Scholar Fellowship, Laboratory of Tree-Ring Research. Collaborator: Kevin Anchukaitis. (***$4200 USD***).

2015.08–15.11 **Kyoto University**, Uji, Japan
Visiting Scholar, Laboratory of Biomass Morphogenesis and Information. Collaborator: Junji Sugiyama. (***¥126,000 JPY***).

2014 **National Nara Research Institute for Cultural Properties**, Nara, Japan
Visiting student. Collaborators: Takumi Mitsutani, Takayuki Okochi, and Yasuharu Hoshino. January to February and August to September. (***¥200,000 JPY***).

GRANTS AND RESEARCH PROJECTS

2025–26 *Reconstruction of flood history in eastern Iowa using tree rings*. Iowa Center for Research by Undergraduates, University of Iowa, PI: Feng Wang; Co-I: Matthew P. Dannenberg. (***$2,500 USD***).

HONORS AND AWARDS

Final list for first assistance (assistant professor), Gemblous Agro-Bio Tech, Université Liège, Belgium, 2025.

Final list for tenure-track assistant professor position, Department of Geosciences, University of Arkansas, Fayetteville, AR, 2025.

Thesis completion scholarship, *Centre d'Études Nordiques* (2022). (***$400 CAD***).

Discovery Prize, BORÉAS Northern Environmental Research Group, *Université du Québec à Rimouski* (2022). (***$300 CAD***).

Mention of excellence (Mention d'excellence; short list for Canada's Governor General's Academic Medal), *Université du Québec à Rimouski* (2022).

The Dean's Honour Roll (Tableau d'honneur de la doyenne des études), *Université du Québec à Rimouski* (2022).

Scholarship for excellent publication, *Centre d'Études Nordiques* (2020, 2021, and 2022). (Total: ***$1200 CAD***).

Scholarship from China Scholarship Council (state level), *Ministry of Education P.R. China* (2017–2021). (***$105,600 CAD***).

National scholarship for M.S. students (state level), *Ministry of Education P.R. China* (2015). (***¥20,000 Chinese Yuan***).

Excellent thesis for undergraduate students (provincial level), *Jiangsu Education Department* (2013). (***¥1,000 Chinese Yuan***).

PEER-REVIEWED PUBLICATIONS

Correspondence (*).

In preparation:

Wang, F.*, *et al.*, Biomass trajectories: integrating ring-width and census data to constrain carbon storage estimates.

Shakeri, Z., Arseneault, D., Simard, M., Parisien, M.A., **Wang, F.**, The interplay of climate teleconnections and regional drought in driving wildfire activity in the eastern Canadian taiga.

Submitted:

Wang, F.*, Wise, E.K., Anchukaitis, K.J., Chang, Q., Dannenberg, M.P., Evaluation of daily gridded climate products using *in situ* FLUXNET data and ecological modeling. Submitted to Environmental Research Letters.

Wang, F.*, Francus, P., Garneau, M., Letellier, P., Martini, M., De Coninck, A., Boucher, E., Quantifying biomass of boreal peatlands using medical X-ray computed tomography. Under review in Progress in Physical Geography.

Published:

23. Gao, C., Yang, B.*, **Wang, F.**, Li, G., Ljungqvist, F.C., Bräuning, A., Belokopytova, L.V., Vaganov, E.A., Meta-analysis of climate effects on radial growth of Qinghai spruce in

northwestern China. Journal of Forestry Research 36, 92. https://doi.org/10.1007/s11676-025-01884-1

22. Wang, S., **Wang, F.***, Yang, B.*, Qin, C., Dannenberg, M.P., Recent and future climate extremes in northwestern China from millennial tree-ring records. Geophysical Research Letters **52**, 2025GL115814. https://doi.org/10.1029/2025GL115814
21. Lapointe, F., Karmalkar, A., Bradley R.S., Retelle M., **Wang, F.**, 2024. Climate extremes in Svalbard over the last two millennia are linked to atmospheric blocking. Nature Communications **15**, 4432. https://doi.org/10.1038/s41467-024-48603-8
20. Yang, B., Li, X., He, M., **Wang, F.**, Zhao, Y., Zhang, P., Wang, J., 2024 The influence of proxy selection on global annual mean temperature reconstructions during the Common Era. Science China Earth Sciences 67, 2522–2534. https://doi.org/10.1007/s11430-024-1348-3
19. Wang, Z., Wang, M., **Wang, F.**, Qin, C., Yang, B., 2024. Is there a temperature or hydroclimate signal in tree-ring width of Qinghai spruce and Qilian juniper in the Wulan region, Qinghai Province? Quaternary Sciences 44, 949–962. (In Chinese with English abstract)
18. Bai, C., Liang, G., Fu, L., Han, E., Guo, X., **Wang, F.**, 2024. Application of micro-computed tomography (μCT) in quantifying xylem vessels of broadleaved trees. Chinese Journal of Applied Ecology 35, 1214–1222. (In Chinese with English abstract)
17. **Wang, F.***, Arseneault, D., Boucher, É., Gennaretti, F., Lapointe, F., Yu, S., Francus, P., 2023. Volcanic imprints in last-millennium land summer temperatures in the circum North-Atlantic area. Journal of Climate, 36, 5923–5939. https://doi.org/10.1175/JCLI-D-23-0107.1.
16. Yang, B., He, M., Yang, L., **Wang, F.**, Ljungqvist, F., 2023. Pine maximum latewood density in semi-arid northern China records hydroclimate rather than temperature. Geophysical Research Letters 50, e2023GL104362. https://doi.org/10.1029/2023GL104362
15. **Wang, F.***, Arseneault, D., Boucher, É., Gennaretti, F., Yu, S., Zhang, T., (2022). Tropical volcanoes synchronize eastern Canada with Northern Hemisphere millennial temperature variability. Nature Communications 13, 5042. https://doi.org/10.1038/s41467-022-32682-6
14. **Wang, F.***, Arseneault, D., Boucher, É., Galipaud Gloaguen, G., Deharte, A., Yu, S., Trou-Kechout, N., 2020. Temperature sensitivity of blue intensity, maximum latewood density, and ring width data of living black spruce trees in the eastern Canadian taiga. Dendrochronologia 64, 125771. https://doi.org/10.1016/j.dendro.2020.125771
13. **Wang, F.***, Arseneault, D., Boucher, É., Yu, S., Ouellet, S., Chaillou, G., Delwaide, A., Wang, L., 2020. Chemical destaining and the delta correction for blue intensity measurements of stained lake subfossil trees. Biogeosciences 17, 4559–4570. https://doi.org/10.5194/bg-17-4559-2020
12. **Wang, F**., Arseneault, D., Pan, B.*, Liao, Q., Sugiyama, J., 2019. Pre-1930 unstable relationship between climate and tree-ring width of *Pinus taiwanensis* hayata in southeastern China. Dendrochronologia 57, 125629. https://doi.org/10.1016/j.dendro.2019.125629

Before 2019:

11. Shi, J.*, **Wang, F.**, Zhang, Y., 2017. Anatomical and FTIR analyses of phloem and xylem of *Tetracentron sinense*. Journal of Forestry Research 28, 1273–1279. https://doi.org/10.1007/s11676-017-0425-4
10. Xiong, X., Qian, W., Fang, L., Liao, Q., Wu, Z., **Wang, F.***, Zhang, M., 2016. Producing process for veneer decorative straw particleboards. Wood Research 61, 465–474.

Publication in other languages:

9. Zhang, Y., **Wang, F.**, Pan, B.*, 2017. Investigations on radial and tangential bending strength and failure characteristics of Masson Pine. China Forest Products Industry 44, 26–29. (In Chinese)
8. Du, W., **Wang, F.**, Pan, B., Chen, X.*, 2017. Anatomical secondary structures of three species and one variety in the genus *Sorbus* L. Journal of Anhui Agricultural University 44, 857–861. (In Chinese with English abstract)
7. Yang, B., He, S., **Wang, F.**, Que, Z., Pan, B., Zhu, Y.*, 2016. Thermal performance of electrically heated flooring prepared by thin Chinese fir glulam. Journal of Forestry Engineering 1, 46–50.
6. Liao, Q., Pan, B.*, **Wang, F.**, 2016. Identification of archaeological wood excavated from Nanjing Longjiang shipyard. China Forest Products Industry 43, 23–27. (In Chinese)
5. **Wang, F.**, He, Q., Lu, K., Qiu, Z., Pan, B.*, Lian, C., Pan, H., 2015. Distribution of the gelatinous fiber and the anatomical difference between the gelatinous and the normal fibers in the new clones of *Populus deltoids*. Journal of Anhui Agricultural University 42, 34–38. (In Chinese with English abstract)
4. Shi, J.*, **Wang, F.**, Luo, J., 2015. Anatomical feature and spectroscopy of reaction wood in *Liriodendron chinense*×*L. tulipifera*. Journal of Nanjing Forestry University (Natural Science Edition) 58, 125–129. (In Chinese with English abstract)
3. **Wang, F.**, Pan, B.*, Tang, J., Pan, Takao, I., 2014. Comparative study on secondary xylem structure in Liriodendron and its implication on phylogeny. Journal of Anhui Agricultural University 41, 451–455. (In Chinese with English abstract)
2. Pan, B.*, **Wang, F.**, Lian, C., Pan, H., 2014. Physical and mechanical properties of new *Populus deltoides* clones. Journal of Anhui Agricultural University 41, 928–933. (In Chinese with English abstract)
1. **Wang, F.**, Pan, B.*, Li, Y, Pan, Takao, I., 2014. Comparison of microscopic structure of secondary phloem in *Liriodendron*. Journal of Nanjing Forestry University (Natural Science Edition) 56, 113–118. (In Chinese with English abstract)

BOOKS AND CHAPTERS

Trouet, V., (2025). In the Circle of Ancient Trees: Our Oldest Trees and the Stories They Tell. Greystone Books. Contributing author (the book will be available on Oct. 14, 2025).

Itoh, T., et al. (2022). Anatomical database and atlas of Chinese wood. Kaiseisha Press, Japan. (https://www.kaiseisha-press.ne.jp/cnwood/). First contributing author.

CONFERENCES AND INVITED TALKS

Conferences:

2024.09 The measuring methods and application of tree-ring density. China Conference on Geography, Nanjing, China. **Oral**.

2024.04 A 1300-year tree-ring density record reveals the impact of volcanism on summer temperatures in northeastern North America. The 8th Conference on Dendrochronology in China, Xi'an, China. **Oral**.

2023.03 Challenges for the detection of volcanic imprints in temperature reconstructions. *Congrès des étudiant·e·s, GEOTOP* Sherbrooke, Canada. **Poster**.

2022.12 The strength of high-resolution X-μCT scanning for tree-ring science and wood anatomy. *2022 International Youth Forum for Wood Anatomy*. Online. **Oral**.

2022.06 Filling the North American gap with robust and temperature-sensitive millennial tree ring density data. *AmeriDendro 2022*, Montreal, Canada. **Oral**.

2022.03 Micro-CT boosts the production of high-quality tree-ring density data – An introduction, *Congrès des étudiant·e·s, GEOTOP, online*. **Oral**.

2021.11 Blue intensity as climate proxy: Application on black spruce in the eastern Canadian taiga. *2021 International Youth Forum for Wood Anatomy*. Online. **Oral**.

Invited talks:

2025.04 Biomass trajectories: integrating tree rings and census data to constrain carbon storage estimates. Kohn Colloquium talk, *Department of Geographical and Sustainability Sciences*, *University of Iowa,* US.

2025.02 A closer look at the past climate and forest biomass trajectories: How much can we learn from tree rings? *Department of Geosciences*, *University of Arkansas,* US.

2025.02 Why, how, and where tree-ring density is needed for Common Era climate reconstructions? *Laboratory of Tree-Ring Research*, *University of Arizona,* US.

2023.10 Using micro-CT to study tree rings. *Geojeudi workshop*, *Centre Géoscientifique de Québec*, Canada.

2022.10 Synchronous multidecadal summer temperatures in eastern Canada and Northern Hemisphere: Evidence from high-quality millennial tree-ring density data. *Lamont Doherty Earth Observatory, Columbia University,* US.

2022.02 Challenge of the blue intensity method in presence of lake subfossils. *International Blue Intensity Network Development (I-BIND) Working Group*. Available on YouTube: https://www.youtube.com/watch?v=bsf4oYAkLDc.

2020.08 Tree-ring density and blue intensity as climatic and ecological indicators: advantages vs. disadvantages. *Université du Québec en Abitibi-Témiscamingue,* Canada.

2019.06 Millennial tree rings in the eastern Canadian taiga: maximum tree ring density for climate reconstructions. *Northwest Institute of Eco-Environment and Resources, Chinse Academy of Science*, Lanzhou, China.

2019.05 New perspectives and techniques in dendrochronology. *China Meteorological Administration Institute of Desert and Meteorology*, Urumqi, China.

PEER REVIEW

Global Change Biology: 2022.
Climate of the Past: 2022.
Trees, Structure and Function: 2022.
Tree-ring research: 2023.
Global and Planetary Change: 2023(2).
Dendrochronologia: 2023, 2024(3), 2025(3).

ACADEMIC MEMBERSHIP

2021– Tree-Ring Society.
2022–2024 GEOTOP Research Centre in Earth System Dynamics.
2017–2021 Centre d'études Nordiques.

OUTREACH AND SERVICE

2025.04 Pre-show presentation in collaboration with Dr. Erika K. Wise. *When It Rains It Pours: Climate Change and Extreme Events*, for the Science on Screen® file series "Weathering with You" at FilmScene, Iowa City.

DATA ANALYSIS SOFTWARE

R (advanced), Python and Matlab (basic) Statistics, QGIS & ArcGIS, and tree-ring cross-dating and standardization tools.

LANGUAGES

Chinese, English (fluent), and French (basic).