

DONGYANG WEI

dywei@udel.edu

RESEARCH INTEREST

Food Security, Climate Change, Human-environment Interactions

EDUCATION

- University of Delaware, USA** Aug. 2019 – Present
Ph.D. student in the Department of Geography and Spatial Science
- University of Reading, UK** Oct. 2018 – Apr. 2019
Research Assistant in the School of Archaeology, Geography and Environmental Science
Granted by European Research Council
(Project: Global Change 2.0 -- Unlocking the past for a clearer future, Grant No. 694481).
- Imperial College London, UK** Oct. 2017 - Sept. 2018
Master of Research in Ecosystem and Environmental Change, **Merit**
- Shanghai Jiao Tong University (SJTU), China** Sept. 2013 - Jun. 2017
Bachelor of Agriculture in Landscape Architecture, **GPA 85.6/100, Rank 3/34**
- Technical University of Munich, Germany** Apr. 2015 - Aug. 2015
Exchange Student in Civil Engineering
Granted by Deutscher Akademischer Austausch Dienst (DAAD) and Shanghai Jiao Tong University

PUBLICATION

Turner, M., **Wei, D.**, Prentice, I.C., and Harrison, S. P.: The impact of methodological decisions on climate reconstructions using WA-PLS. *Quaternary Research*, 1-16. <https://doi.org/10.1017/qua.2020.44>, 2020.

Wei, D., Prentice, I. C., and Harrison, S. P.: The climatic space of European pollen taxa. *Ecology*, 101, 8. <https://doi.org/10.1002/ecy.3055>, 2020.

Wei, D., González-Sampériz, P., Gil-Romera, G., Harrison, S. P., and Prentice, I. C.: Climate changes in interior semi-arid Spain from the last interglacial to the late Holocene. *Climate of the Past Discussions*. <https://doi.org/10.5194/cp-2019-16>, 2019.

DATASET

Wei, D., S. P. Harrison, and I. C. Prentice, (2019). The climatic space of European pollen taxa. University of Reading. Dataset. <http://dx.doi.org/10.17864/1947.204>.

RESEARCH EXPERIENCE

✧ Dietary Transitions Can Overcome the Nutritional Threat of Increasing CO₂

University of Delaware

Dec. 2019 - Present

Supervisor: Dr. Kyle F. Davis

- Estimate the historical nutrient supply from FAO Food Balance Sheet for 172 countries, 76 food items
- Apply the effect of elevated CO₂ (eCO₂) on 12 staple foods
- Examine changes in nutrient supply under income-based, planetary health (i.e., EAT-Lancet), and healthy (i.e., Mediterranean, vegetarian) dietary projections to 2050 and compare these to the effects of eCO₂

✧ **Climate and Vegetation Changes in Semi-Arid Spain from the Last Interglacial to Recent Times**

Imperial College London & University of Reading

Jan. 2018 - Jun. 2019

Co-supervisor: Professor Iain Colin Prentice, Fellowship of the Royal Society

Co-supervisor: Professor Sandy Harrison, Co-chair of PMIP and Chair of WDS in ICSU

- Surface pollen and climate data collection and integration covering the whole Europe and Middle East
- Bioclimatic variables calculation using SPLASH model in *Python*
- Utilized canonical correspondence analysis (CCA) and generalized additive models (GAMs) to analyze the correlation between modern climatic variables and vegetation distribution in *R*
- Built transfer model with weighted averaging partial least-squares regression (WA-PLS) and reconstructed past bioclimate variables in semi-arid Spain based on fossil pollen data from ca 130 ka to the present day

✧ **Long-term Ecological Research on Negative Oxygen Ions in Urban Forests in Shanghai**

School of Agriculture and Biology, Shanghai Jiao Tong University

Jul. 2016 - Jun. 2017

Supervisor: Dr. Shan Yin, Associate Professor

- Built ecological stations in Zhongshan Park and Dongping National Forest Park for long-term observation
- Performed long-term observation on the concentration of negative oxygen ions at nine sampling points in different environmental conditions
- Analyzed the effect of weather factors, plants, and pollutants on the concentration of negative ions with SPSS

✧ **Composition Differences in Essential Oil of Different Kinds of Rosemary in Different Seasons**

School of Agriculture and Biology, Shanghai Jiao Tong University

Sept. 2014-Mar. 2015

Mentor: Xiaohong Ma, Research Associate

- Extracted essential oil from different rosemary by hydrodistillation, and performed composition analysis
- Identified the composition difference among different varieties and different growth seasons.

SKILLSET

IT >2 year of experience in research with R, Python, SPSS, C++, ArcGIS software.
~2 years of experience in drawing and model building with PS, AI, LR, AutoCAD, and SketchUp
Proficient operation in Microsoft Word, Excel, and PowerPoint

AWARD & HONOR

- ◆ Outstanding Capstone Project, Shanghai Jiao Tong University Jun. 2017
- ◆ Advanced Agriculture Scholarship 2015-16, Shanghai Jiao Tong University Oct. 2016
- ◆ Excellent Exchange Student Scholarship 2014-15, Shanghai Jiao Tong University Aug. 2015
- ◆ Excellent Exchange Student Scholarship, Deutscher Akademischer Austausch Dienst (DAAD) Apr. 2015
- ◆ Academic Excellence Scholarship 2013-14, Shanghai Jiao Tong University Oct. 2014

INTERNSHIP EXPERIENCE

✧ **Design Assistant, China Urban Construction Design & Research Institute** Dec. 2015 – Feb. 2016

- Participated in the construction planning of Beautiful Village in Hebei Province, China
- Studied urban and rural planning and design in North China