Curriculum Vitae

Basic Information

Name: Wantong Li
Date and place of birth: 20/07/1995, Chuzhou, Anhui, China
Nationality: Chinese
PhD discipline: Environmental science -- global change ecology
Successful defence date: 05/06/2023
Language: Chinese (native), English (good)
Programming: Python (good)
Email: wantong@bgc-jena.mpg.de

Education

- **01/02/2023 – Present: Postdoctoral researcher at Max Planck Institute for Biogeochemistry, Jena**

  Project: Deciphering socio-ecosystem interactions and transitions with diverse Earth Observations

- **01/11/2019 – 05/06/2023: PhD candidate at Max Planck Institute for Biogeochemistry, Jena**

  Thesis: Terrestrial vegetation-water interactions in observations and models (magna cum laude)

- **01/09/2016 – 01/07/2019: MSc. in Remote Sensing at Nanjing University, China**

  09/2017 - 08/2018: Exchange MSc. in Environmental Earth Science at Free University of Berlin

  MSc. Thesis: vegetation productivity and its relationship to meteorology across African ecosystems

- **01/09/2012 – 01/07/2016: BSc. in Geographic Information System at Anhui University, China**

  BSc. Thesis: Evaluating the habitat suitability of waterbird in a wetland ecosystem in China

Manuscript in preparation (1st author during Postdoc)

- **Li, W.**, Duveiller, G., Gans, F., Frank, D., Smits, J., Kraemer, G., Machecha, M., Reichstein, M. Systemic human-biosphere-atmosphere monitoring and diagnostics. In Prep.
- **Li, W.**, Orth, R., Duveiller, G., Wieneke, S., Forkel, M., Migliavacca, M., Niu, S., Gentine, P., Reichstein, M. Regulation of the global carbon and water cycles through vegetation structural and physiological dynamics. Environmental Research Letters. Invited Review. To be submitted.
- **Li, W.**, Migliavacca, M., Konings, A., Miralles, D., Reichstein, M., Duveiller, G., Orth, R. Disentangling the influence of vegetation structure and physiology on land-atmosphere coupling. In Prep.

Publications (1st author during PhD)

- **Li, W.**, Pacheco-Labrador, J., Migliavacca, M., Miralles, D., Hoek van Dijke, A., Reichstein, M., Forkel, M., Zhang, W., Frankenberg, C., Panwar, A., Zhang, Q., Weber, U., Gentine, P., & Orth, R. Widespread and complex drought effects on vegetation physiology inferred from space. Nat. Commun. 14, 4640 (2023).
- Lam'barki, M.*, **Li, W.***, O, S., Zhan, C., and Orth, R. Beyond precipitation: diversity of drivers of high river flows in European near-natural catchments, Journal of Hydrology, under review. (* The authors contributed equally to this work)
- **Li, W.**, Reichstein, M., O, S., May, C., Destouni, G., Migliavacca, M., Kraft, B., Weber, U., Orth, R. Contrasting drought propagation into the terrestrial water cycle between dry and wet regions. Earth's Future, 11, e2022EF003441.
- **Li, W.**, Migliavacca, M., Forkel, M., Denissen, J., Reichstein, M., Yang, H., Duveiller, G., Weber, U. & Orth, R. (2022). Widespread increasing vegetation sensitivity to soil moisture. Nature Communications, 13, 3959.
- **Li, W.**, Migliavacca, M., Forkel, M., Walther, S., Reichstein, M. & Orth, R. (2021). Revisiting global vegetation controls using multi-layer soil moisture. Geophysical Research Letters, 48, e2021GL092856.

Other Publications

- Denissen, J., Teuling, A.J., Pitman, A.J, Koirala, S., Migliavacca, M., **Li, W.**, Reichstein, M., Winkler, A.J., Zhan, C. & Orth, R. (2022). Widespread shift from ecosystem energy to water limitation with climate change, Nature Climate Change, 12, 677–684.
- O, S., Bastos, A., Reichstein, M., **Li, W.**, Denissen, J., Graefen, H. & Orth, R. (2022). The role of climate and vegetation in regulating drought-heat extremes, Journal of Climate, 1(aop), 1–21.
- Kroll, J.*, Denissen, J.*, Migliavacca, M., **Li, W.**, Hildebrandt, A. & Orth, R. (2022). Spatially varying relevance of hydrometeorological hazards for vegetation productivity extremes, Biogeosciences, 19, 477-489.
- **Li, W.**, Du, J., Li, S., et al (2019). The variation of vegetation productivity and its relationship to temperature and precipitation based on the GLASS-LAI of different African ecosystems from 1982 to 2013. International journal of biometeorology, 2019, 63: 847-860. (During *MSc.*)
- Li, M., Du, J., **Li, W.**, Li, R., Wu, S., Wang, S. Global Vegetation Change and Its Relationship with Precipitation and Temperature Based on GLASS-LAI in 1982-2015. SCIENTIA GEOGRAPHICA SINICA, 2020, 40(5): 823-832. DOI: 10.13249/j.cnki.sgs.2020.05.017 (In Chinese) (During *BSc.*)
- Yang, Y., **Li, W.**, Zhou, Z., Li, C. The study on the relationship between wetland landscape pattern and water level in Shengjin Lake. Journal of Biology, 2019, 36(02). DOI: 10.3969/j.issn.2095-1736.2019.02.061 (In Chinese) (During *BSc.*)

Conference abstracts

- **Li, W.**, Migliavacca, M., Reichstein, M., Forkel, M., Frankenberg, C., and Orth, R.: Large-scale vegetation physiological responses to drought from multiple satellite-based observations, AGU Fall Meeting 2022, Chicago, 12-17 December 2022, B43F-01, https://agu.confex.com/agu/fm22/meetingapp.cgi/Paper/1120697
- **Li, W**., Migliavacca, M., Forkel, M., Denissen, J., Reichstein, M., Yang, H., Duveiller, G., Weber, U. & Orth, R.: Global vegetation getting more sensitive to short-term soil moisture variability, AGU Fall Meeting 2021, hybrid, 13-17 December 2021, B12B-04, https://ui.adsabs.harvard.edu/abs/2021AGUFM.B12B..04L/abstract

- **Li, W.**, Migliavacca, M., Reichstein, M., Forkel, M., Frankenberg, C., and Orth, R.: Revealing the drought response of large-scale vegetation physiology from multiple satellite-based observations, EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-8239, https://doi.org/10.5194/egusphere-egu22-8239, 2022.
- **Li, W.**, Forkel, M., Migliavacca, M., Reichstein, M., Walther, S., Denissen, J., and Orth, R.: Changing sensitivity of global vegetation productivity to hydro-climate drivers, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-1783, https://doi.org/10.5194/egusphere-egu21-1783, 2021.
- **Li, W.**, Migliavacca, M., Luo, Y., and Orth, R.: Which hydro-meteorological variables control large-scale photosynthesis?, EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-15936, https://doi.org/10.5194/egusphere-egu2020-15936, 2020

Awards & Societal Practice

- Internship: Mapping brilliant people for industrial cooperators, Shanghai, Egon Zehnder, MSc.
- Internship: data cleaning and software testing in AI Car Navigation Project, Hefei, iFLYTEK, BSc.
- Model Student of Academic Scholarship (2017, 2019), MSc. Scholarship.
- Hengxin Scholarship for outstanding students (2013), BSc. Scholarship.
- Model Student of Academic Scholarship (2012, 2013, 2014), BSc. Scholarship.
- University Summer Social Practice Prize (2013), BSc.
- Initiator and Organizer of Campus Photography Studio (2015), BSc.
- The Second Prize of Campus Dance Competition (2014), BSc.

Scientific Activities

- Research stays: Matthias Forkel's group (TU Dresden, 10-11/2020), Christian Frankenberg's group (IUP Heidelberg & Caltech, 03/2022), Alexandra Konings's group (Stanford University, 12/2023), Trevor Keenan's group (UC Berkeley, 12/2023)
- Conference talks: EGU (2020, 2021, 2022, 2023), AGU (2021, 2022)

- Poster: Swiss Climate Summer School 2021, ESA Living Planet 2022, AGU 2023
- Co-supervised 2 master students
- Peer reviewer for Journals: Remote Sensing of Environment, Nature Geoscience, Communications Earth & Environment, JGR Atmospheres, npj Climate and Atmospheric Science, Journal of Hydrology

Invited talks & Lectures

- SIF workshop (Huangshan, China, Sep 2023): Widespread and complex drought effects on vegetation physiology inferred from space.
- Open Earth Monitor workshop (Bolzano, Italy, Oct 2023): Integrated data-driven analysis of climate, biosphere, and socio-economic co-variability: towards a planetary health index
- Lecture -- Global Earth Systems (Freiburg University, Germany, Nov 2023): Vegetation physiology and structure
- Lecture -- Max Planck Research Schools (Jena, Germany, Nov 2023): Systemic human-biosphere-atmoasphere monitoring and diagnostics