

XIULING WANG

Climate gradients · Environmental microbial ecology · Ecological statistics

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Based in China; available for full-time research. Seeking postdoctoral and related research roles.

RESEARCH PROFILE

Environmental microbial ecologist studying how climate gradients, soil depth and environmental conditions shape microbial communities and functional potential. Doctoral research within the multi-institutional EarthShape programme uses Chilean arid-to-humid systems and iDNA/eDNA, amplicon and metagenomic data. This integrated research programme forms three papers on bacteria, archaea and functional genes. Seven peer-reviewed publications, including four first/co-first-author and three corresponding-author papers.

RESEARCH EXPERIENCE & INTERNATIONAL COLLABORATION

Doctoral Researcher | GFZ, Potsdam, Germany | 2019–2025

Conducted molecular experiments, community statistics, environmental analyses and manuscript writing across Chilean climate gradients and deep soils; optimised low-biomass soil DNA extraction. Metagenomic contributions focus on downstream taxonomic and functional data integration, statistics and ecological interpretation, using upstream bioinformatics produced by collaborators.

Built experience in German-Chilean research collaboration through EarthShape, including coordination of samples, data and analyses. Maintains contacts with former collaborators that can support future comparative research. Supervisor: Dirk Wagner; second supervisor: Thomas Friedl; research mentor: Lars Ganzert.

Collaborative research & scientific mentoring | 2025–2026. Contributed study design, statistical analysis, manuscript revision and corresponding-author work to soil DNA-fraction and mushroom-surface microbiome studies.

Research Intern | Institute of Edible Fungi, Shanghai Academy of Agricultural Sciences | 2018–2019. Studied storage temperature and mushroom-associated bacterial communities.

EDUCATION & DOCTORAL STATUS

2019–present: Doctoral studies, University of Potsdam; research at GFZ; degree not yet awarded. Substantive research and the thesis synthesis draft are complete. The archaeal paper is submitted and the full metagenomic manuscript is being revised. Remaining manuscript and degree completion can proceed alongside a new full-time project.

2016–2019: MSc in Ecology, Shihezi University.

2011–2015: BSc in Geography, Zhengzhou Normal University.

METHODS & LANGUAGES

R: data wrangling, multivariate statistics, community-environment analyses, visualisation and reproducible workflows. NGS: 16S/ITS amplicons and downstream metagenomics. Laboratory: low-biomass DNA extraction, iDNA/eDNA separation, PCR and qPCR. Chinese (native); English (research communication).

PEER-REVIEWED PUBLICATIONS

Seven publications, listed in reverse chronological order.

1. Chenyi Mao, **Xiuling Wang** (2026). Depth-dependent differences between direct total DNA and an intracellular-DNA-enriched fraction in bulk-soil bacterial and fungal communities of a *Lonicera japonica* field. *BMC Microbiology*. DOI / Article
Sole corresponding author
2. **Xiuling Wang**, Gaodu Liang, Li Zhuang (2026). Rhizosphere fungal communities of four *Ferula* species in their native habitats in northern Xinjiang. *Rhizosphere* · 39 · 101421. DOI / Article
First and co-corresponding author
3. Jingming Ma, Mingzheng Zhang, Qian Liu, **Xiuling Wang** (2026). Mechanical Damage Modulates Bacterial and Fungal Succession on the Surface of *Hypsizygus marmoreus* During Refrigerated Storage. *Microorganisms* · 14(4) · 762. DOI / Article
Co-corresponding author
4. **Xiuling Wang**, Lars Ganzert, et al. (2024). The effects of climate and soil depth on living and dead bacterial communities along a longitudinal gradient in Chile. *Science of the Total Environment* · 945 · 173846. DOI / Article
First author
5. **Xiuling Wang**, Shunjie Liu, et al. (2019). Low Temperature (15 °C) Reduces Bacterial Diversity and Prolongs the Preservation Time of *Volvarela volvacea*. *Microorganisms* · 7(10) · 475. DOI / Article
Co-first author
6. **Xiuling Wang**, Zhongke Wang, et al. (2018). Bacterial diversity and community structure in the rhizosphere of four *Ferula* species. *Scientific Reports* · 8 · 5345. DOI / Article
First author
7. Zhong-Ping Tian, **Xiu-Ling Wang**, Xiao-Yi Zhao, Li Zhuang (2016). A unique mountainous vertical distribution patterns and related environmental interpretation – a case study on the northern slope of the Ili River Valley. *Pakistan Journal of Botany* · 48(5) · 1877–1886. DOI / Article
Second author

SUBMITTED MANUSCRIPT & WORK IN PREPARATION

Xiuling Wang, Alexander Bartholomäus, Lars Ganzert, Thomas Friedl, Rómulo Oses, Dirk Wagner. Soil archaeal communities in intra- and extracellular DNA share broad regional patterns but diverge locally along the Chilean Coastal Cordillera.
Submitted to *Applied Soil Ecology* (September 2026)

Xiuling Wang, Alexander Bartholomäus, Sizhong Yang, Lars Ganzert, Thomas Friedl, Rómulo Oses, Dirk Wagner. Scale-dependent organisation of cell-associated microbial functional genes across climate-soil systems and soil depth in granitoid soils of the Chilean Coastal Cordillera.
Full manuscript drafted; target journal: *Geoderma*