Updated June 2025

yguo@agcenter.lsu.edu
yaolinguo22@gmail.com
Louisiana State University Agriculture Center
School of Renewable Natural Resources
Baton Rouge, LA 70803

Yaolin Guo Ph.D.

Education & Scientific Career

2024 – present **Postdoctoral Researcher** in Plant Ecology
Louisiana State University Agriculture Center, Baton Rouge, LA

2017 – 2024 **Ph.D.** in Ecology (cotutelle program)
Fudan University, Shanghai, China (home institution)
University of Tübingen, Tübingen, Germany (partner institution)

2012 – 2016 **B.Sc.** in Chemistry, Shanxi University, Taiyuan, China

Selected Publications

Guo, Y., Ju, R.-T., Perapa, M., Wang, H., Wang, M., Lu, J., Li, B., Ju, R.-T. & Bossdorf, O. (2025). Herbivory increases towards lower latitudes in native but not introduced plants. *Submitted to Ecology Letters*. https://doi.org/10.1101/2024.01.24.576872

Guo, Y., Roberts, B. J., Nyman, J. A., Plumlee, J. D., Davenport, T. M., Hopper, G. W., & La Peyre, M. K. (2025). Expansion trends of *Phragmites australis* and its impact on the Louisiana Gulf Coast. *Submitted to Ecological Applications*.

Lu, J., **Guo, Y.**, Richards, C., Li, L., Wu, J., Li, B., & Ju, R.-T. (2025). Rapid adaptive evolution of multidimensional traits in a widespread plant invader. *Submitted to Plant Communications*. https://10.22541/au.172069437.75727417/v1

Irimia, R., Parepa, M., Giaccone, E., Sebesta, N., **Guo, Y.**, Karrenberg, S., Barni, E., Richards, C., Bossdorf, O. (2025). A continent-wide clone? Jack-and-master strategy in invasive Japanese knotweed populations across Europe. *Submitted to Journal of Ecology.*

2025 Lu, J., **Guo, Y.**, Zhao, Y., Wu, J., Li, B., Richards, C. L., & Ju, R.-T. (2025) Silicon mediates geographic variation of herbivory-related traits in a widespread plant invader. *Accepted.*

Cao, P., Liao, Z., Zhang, L., Wang, S., Bi, J., Zhao, Y., Parepa, M., Lin, T., **Guo, Y.**, Bossdorf, O., Richards, C. L., Endriss, S. B., Wu, J., Ju, R.-T., & Li, B.

(2025). Cross-continental variation of herbivore resistance in a global plant invader. *Ecography*, e07569.

Liu, L., Yin, M., **Guo, Y.**, Song, H., Guo, X., & Guo, W. (2025). Climatic adaptation and phylogenetic history shape the intra-specific variation of CSR strategies in a widespread grass. *Plant Diversity*, in press

2024 Liu, L.*, **Guo, Y. ***, Wu, Y., Yin, M., Guo, X., Eller, F., Richards, C. L., Brix, H., Ju, R.-T., & Guo, W. (2024). Revealing biogeographic patterns in genetic diversity of native and invasive plants and their association with soil community diversity in the Chinese coast. *Oikos*, e10116. (*equal contribution)

Zhang, Y.*, **Guo, Y.***, Wang, H., Xu, H., Zhang, D., Qian, J., Hu, Y. (2024) Divergence in spatial patterns of leaf stoichiometry ratios between native and non-native plants across coastal wetland. (*equal contribution) *Frontiers in Marine Science*, 11, 1425587.

Hao, Y., Wang, X.-F., **Guo, Y.**, Li, T.-Y., Yang, J., Ainouche, M. L., Salmon, A., Ju, R.-T., Wu, J., Li, L.-F., & Li, B. (2024). Genomic and phenotypic signatures associated with the adaptation of invasive species *Spartina alterniflora* Loisel. *Plant Communications*.

Jiang, J.-J., Zhao, Y.-J., **Guo, Y.**, Gao, L., Richards, C. L., Siemann, E., Wu, J., & Ju, R.-T. (2022). Restoration of native saltmarshes can reverse arthropod assemblages and trophic interactions changed by a plant invasion. *Ecological Applications*, e2740.

Zhao, Y., Wang, S., Liao, Z., Parepa, M., Zhang, L., Cao, P., Bi, J., **Guo, Y.**, Bossdorf, O., Richards, C., Wu, J., Li, B., & Ju, R.-T. (2024). Geographic variation in leaf traits and palatability of a native invasive plant during domestic expansion. *Ecology*, e4425.

Yin, M., Zhang, X., Zhu, H., Sheng, W., Wu, Y., Jiang, D., Wen, Q., Shao, H., **Guo, Y.**, Wang, C., Yu, X., Brix, H., Liu, L., Guo, W. (2024). Distinct cadmium bioaccumulation characters and associated physiological and rhizobacterial mechanisms in two major lineages of *Phragmites australis* of China. *Journal of Environmental Management*, 371.

2023 **Guo, Y.***, Zhang, Y.*, Wu, J., Richards, C. L., Bossdorf, O., Li, B., & Ju, R.-T. (2023). Geographic variation of litter chemistry and palatability in an invasive plant versus its native competitor. *Journal of Biogeography*, *50*, 1139–1150. (*equal contribution)

CONFERENCE

2024 **Guo, Y.** Expansion trends of invasive *Phragmites australis* and its impact. Poster. The 2024 meeting of the Gulf Estuarine Research Society (GERS), Fairhope, AL

2022 **Guo, Y.** Global heterogeneity of biogeographic patterns in herbivory between native and exotic plants: a meta-analysis. Oral Presentation. The Meeting of Students in Evolution and Ecology, Tübingen, Germany

Guo, Y. Geographic variation of litter chemistry and palatability in an invasive plant versus its native competitor. Poster. 34th Plant Population Biology Conference, Bozen-Bolzano, Italy

2020 **Guo, Y.** Latitudinal gradient of plant-arthropod interactions. Oral Presentation. 4th International Conference on Global Change and Biological Invasion, Zhenjiang, China

Guo, Y. Restoration of native saltmarshes can reverse the changes in arthropod assemblages and trophic interactions resulting from *Spartina alterniflora* invasion. Oral Presentation. Young Researchers Forum, Key Laboratory of Biodiversity Sciences and Ecological Engineering (Ministry of Education), Shanghai, China

2019 **Guo, Y.** Latitudinal variations in traits related to plant-detritivore interactions in Chinese coastal wetlands: a comparison of invasive versus native plants. 1st Biogeography Conference of China, Peking University, Beijing, China

MENTORSHIP

2022 – 2023 **Jenny Trapp**, BSc in Biology, University of Tübingen
Thesis: Latitudinal gradients in induced and constitutive chemical defenses of invasive knotweed.

2022 **Robin Binder**, BSc in Biology, University of Tübingen, Honor's thesis student
Thesis: Latitudinal variations in leaf palatability and traits related to defenses of European invasive knotweed.

2021 – 2022 **Chengjie Yao**, BSc in Ecology, Fudan University
Thesis: Biogeographic patterns in growth traits and ecological strategies of invasive *Spartina alterniflora* and native *Phragmites australis*.

2020 – 2021 **Jie Zhao**, MSc in Ecology, Fudan University
Thesis: Preference and performance of *Acanthotomicus suncei* between the exotic plant *Liquidambar styraciflua* and the native plant *L. formosana* and their underlying causation.

TEACHING EXPERIENCE

2021 – 2023 **Demonstrator and Assisting Lecturer**, Fudan University
Course: Data Statistics

2021 **Demonstrator and Assisting Lecturer**, Fudan University
Course: Current Biology Experiment

2018 – 2019 **Teaching Assistant**, Fudan University
Course: Ecosystem Ecology

2017 – 2018 **Teaching Assistant**, Fudan University
Course: Soil Ecology

AWARDS

2018 – 2019 **Academy Scholarships**, School of Life Science, Fudan University

2022 – 2023 **Chinese Government Scholarship**, China Scholarship Council

2017 – 2022 **Academic Excellence Scholarship**, Fudan University

2015, 2016 **University Excellence Scholarship**, Shanxi University

RELEVANT SKILLS

Quantitative skills
Proficient in statistical analysis and mathematical modelling in R
- Bayesian and frequentist statistical frameworks
- Geospatial analysis
- Hierarchical modeling
- Non-linear modeling
- Species distribution modeling

Metabolomics analysis

Programming
LaTeX
R
Stan
Git
ArcGIS
Python

Fieldwork skills
Vegetation and arthropod surveys/sampling
Plant functional traits sampling
Plant specimen collection and preparation
Seed collection and processing
Full-factorial experimental design

Experimental skills
Proficient in molecular experiment and chemical analysis tools
Greenhouse and common garden management

Relevant Skills

Quantitative skills
Proficient in statistical analysis and mathematical modeling in R
- Bayesian and frequentist statistical frameworks
- Geospatial analysis
- Hierarchical modeling & Non-linear modeling
- Species distribution modeling

Programming	R, Stan, Git, LaTeX, ArcGIS, Python
Experimental skills	Vegetation and arthropod surveys/sampling Plant functional traits sampling Plant specimen collection and preparation Full-factorial experimental design Proficient in molecular techniques and chemical analysis tools