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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 UniversityCourse: Ecosystem Ecology

2017 – 2018 **Teaching Assistant**, Fudan UniversityCourse: 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