Yutong Gao

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EDUCATION

M.S. in Engineering | Landscape Architecture | Shanghai Jiao Tong University Shanghai, China
(GPA: 3.82/4.0) Sep.2021 –Sep.2024
Major Courses: City and Regional Planning (A)
Landscape Ecology (A+)
Pollution Ecology (A)
History & Theory of Landscape Architecture (A+)
Application and Technology of Landscape Plants (A)
Urban Ecology: Science of Cities (A)
Thesis: landscape ecology, urban plant diversity, phylogenetic diversity

B.S. in Agriculture | Landscape Architecture | China Agricultural University Beijing, China
(GPA: 3.91/4.0, **Ranking: 1/34**) Sep. 2017 – Jun. 2021
Major Courses: Basis of Geology (A+)
Floriculture (A+)
Landscape Dendrology (A+)
Urban Green Space System Planning (A+)
Ecology for Landscape Architecture (A)
Introduction of Remote Sensing and GIS (A+)
Site Engineering for Landscape Architecture (A)
Landscape and Garden Design (A)
Probability Theory Mathematical Statistic (A)

HONORS & AWARDS

2023 Third Prize, 2023 Chengdu Park City International Garden Season and The 6th BFU International Garden-Making Week
2022 & 2023 Second Prize Academic Scholarship
2021 Second Prize, The 1st National Community Garden Design and Creation Construction Competition and Community Participation
2021 First Prize, Yuanye Awards International Competition
2021 **Beijing Outstanding Graduate**
2021 China Agricultural University Outstanding Graduate
2020 Outstanding College Students Online Summer Camp, School of Urban Planning and Design, Peking University
2019 & 2018 & 2017 China Agricultural University Merit Student
2019 First prize Academic Excellence Scholarship
2019 **China National Scholarship**
2018 Outstanding Student Scholarship

PUBLICATION

- **Gao, Y.,** Wang, M., Bi, X. *et al.* Plant phylogenetic diversity along the urban–rural gradient and its association with urbanization degree in Shanghai, China. *Landsc Ecol* **39**, 166 (2024). https://doi.org/10.1007/s10980-024-01958-1
- Huang, M., Chen X., **Gao Y.**& Chang Q. (2021). Comparative analysis of visitors' perception and usage characteristics in Urban Forest Park, Fujian Architecture & Construction (11),51-55+101.
- **Gao, Y.,** Wang, M., Bi, X. *et al.* Urban Environmental Filtering Explains Variation in Plant Phylogenetic Diversity in Shanghai, China (Completed and under modifying)
- Wang, M., **Gao, Y.**, Bi, X. *et al.*The impact of human preference on urban plant diversity assessed from both species and phylogenetic perspectives (Completed and under modifying)

RESEARCH PROJECTS

May 2023 – May 2024
Shanghai, China

Dissertation for M.D.: Spatial Patterns and Influencing Factors of Plant Phylogenetic Diversity along Urban-Rural Gradients in Shanghai, China

- Collected data on plant diversity and environmental factors from 134 sampling points distributed along two 18km-wide transects (east-west and north-south) that passed through the city center. The phylogenetic diversity of plants at each sampling site was then calculated. Subsequently, gradient analysis was employed to explore the distribution patterns of plant phylogenetic diversity along the urban-rural gradients.
- Analyzed the relationship between plant phylogenetic diversity and the degree of urbanization. The proportion of urban land use within a 1km radius around each sampling point was used as an indicator of urbanization. Regression analysis was then conducted to investigate this relationship.
- Investigated the impact and pathways of urbanization on plant phylogenetic diversity. Based on four urban filters namely, habitat transformation, habitat fragmentation, urban environmental factors, and human preferences. Redundancy analysis and structural equation model was used to examine the relationships and relative importance of multiple factors on plant system development diversity.

Jul. 2023 – Oct. 2023
Shanghai, China

National Key Research and Development Program of China, Project Five: Optimization of Urban Ecological Spatial Patterns and Function Enhancement with Multi-Objective Coordination Technology and Mode (2022YFF1301105)

- Participated in the plant species survey in Shanghai in 2023 as a re-survey in 2014. A total of 260 sample plots were randomly selected using 3 km × 3 km grids.
- Identified plant species, recorded photographs, and surveyed all vascular plant species and quantities. Besides we collected surface soil samples to test its physical and chemical properties as well as pollutants.
- (In addition to the plant survey and soil collection work, I was responsible for volunteer recruitment, organization, and training in my work.)

Jun. 2022
Shanghai, China

Course paper: Landscape ecology 1987–2022: A retrospective analysis with bibliometric

- Explored the three stages of publication changes in *Landscape Ecology* from 1987 to 2022 through bibliometric analysis.
- Performed co-citation analysis and cluster analysis on 3128 cited literatures using *Citespace*, and visualized changes in research topics.
- Summarized the trends in landscape ecology science over the past decade through co-occurrence analysis of keywords and mutation detection.
  (Received an A+ rating in the *Landscape Ecology* course)

Jun. 2022
Shanghai, China

Course paper: Impacts of the COVID-19 Pandemic on Spatiotemporal Characteristics of Nighttime Light Data in Shanghai

- Used NPP/VIIRS data of Shanghai from the COVID-19 pandemic outbreak stage during March to May in 2022, and analyzed spatial distribution characteristics of nighttime light data of the different stages of the pandemic
- Presented the significant changes in urban nighttime light data through the spatial distribution of nighttime light, which were closely related to the development stages of the pandemic and changes in human activities
- Demonstrated the feasibility of using nighttime light trends to reflect the impact of the pandemic on cities at the urban scale, and assisted in assessing the impact of control measures on human activities during major public health events in the post-pandemic era
  (Received an A rating in the *City and Regional Planning* course)

Jan. 2021 – Sep. 2021
Zhejiang, China

Thesis for B.D.: Post House for Migratory Birds: Landscape Regeneration Planning and Design of Quarrying Wasteland Based on Migratory Bird Habitat Restoration

- Selected the design site in Yuanhua Town, Haining City, Zhejiang Province, which is an important node for migratory birds in China, chose 20 species of migratory birds from five local ecological groups as target species based on local observation data
- Constructed the ecological factor index system of the habitat, reshaped and restored the topography, rock fracture surface, water system, and native plant community of the abandoned quarry mines, and formed a suitable habitat space for migratory birds
- Planned a "three rings - five zones - multiple points" ecological landscape for watching migratory birds and participating in ecological sightseeing on the basis of the habitat design, and explored a sustainable coexistence strategy of "human-bird-land"
- Published as the first author in *Worldscape*（Vol.24）: ISSN 2222-9574

Mar. 2020 – Mar. 2021
Beijing, China

Undergraduate Research Program (URP) of China Agricultural University: Comparative Analysis of Visitors' Perception and Usage Characteristics in Urban Forest Park, Beijing

- Investigated the Guangyanggu Urban Forest Park in Beijing and Baiwangshan Forest Park based on the Post Occupancy Evaluation (POE) method, and conducted a comparative analysis and summary of the behavioral patterns, environmental perceptions, and post-use evaluation of park users
- Established a perception evaluation system for urban forest parks based on the POE method, investigated the perception and usage characteristics of urban forest parks in Beijing through the ways of questionnaires and behavioral observations
- Provided guidance and reference for the future construction planning of urban forest parks and the improvement of users' recreational experience
- Publication: Huang, M., Chen X., **Gao Y.**& Chang Q. (2021). Comparative analysis of visitors' perception and usage characteristics in Urban Forest Park, Fujian Architecture & Construction (11),51-55+101.

Mar. 2019 – Mar. 2020
Beijing, China

Beijing College Students' Innovation and Entrepreneurship Training Program: Relationship between Spatial Pattern and Microclimate of Mountain Village Based on Envi-met in Beijing, China

- Chose two villages in Mentougou District in Beijing as the research objects, collected the environmental data and thermal comfort information of the villages through field surveys
- Utilized the Envi-met software to operate a numerical simulation of the microclimate environment and assess the thermal comfort level in the villages, researched the coupling relation such as wind, heat, and other microclimate elements and the internal spatial layout of traditional settlements
- Investigated the basic spatial patterns of the villages, explored the microclimatic characteristics of each spatial pattern type in the villages,
- Surveyed the distribution pattern of thermal comfort in the villages, and probed into the relationship between thermal comfort and the spatial pattern of the villages, proposed strategies and suggestions to improve the village microclimate landscape
- Wrote a final report about the project, and received a top 20% merit rating from the China Agricultural University for the project results.

COMPETITIONS

2023 Chengdu Park City International Garden Season and The 6th BFU International Garden-Making Week May 2023 Sichuan, China

Team member

- Organizers: Education Committee of Chinese Society of Landscape Architecture | Beiing Forestry University | Chengdu Municipal Park City Construction and Management Breau
- Award: the third prize

The 1st National Community Garden Design and Construction Competition & Community Participation Jan. 2022 Shanghai, China

Team member

- Organizer: Department of Landscape Architecture, School of Architecture, Tongji University
- Award: the second prize

2021 Yuanye Awards International Competition 2021 Beijing, China

Author

- Organizers: International Landscape Architecture Association | Asian Landscape Architecture Society | International Green Architecture and Housing Landscape Association | China Society of Natural Resources
- Award: the first prize

ACADEMIC & VOLUNTEER ACTIVITIES

Course of master's degree program in Landscape Architecture (International): Landscape Ecology, Shanghai Jiao Tong University (Teaching Assistant) Sep. 2022– Dec. 2022 Shanghai, China

The 8th Summer School of SURE China Chapter Biodiversity and Conservation: Global Perspectives and Comparisons (Member & Assistant) Aug. 2022 Shanghai, China

Stormwater Parametric Management Studio, *Landscape Architecture* (Member) Sep. 2019 Beijing, China

Sports Department, Student Union, China Agricultural University (President) 2018 – 2019 Beijing, China

2018 Beijing Marathon Volunteer Activities (Volunteer) Sep. 2018 Beijing, China

Summer Social Practice of China Agricultural University: Poverty Alleviation Research and Social Practice in Zhoukou, Henan Province (Member) Aug. 2018 Henan, China

Volunteer Service General Team, China Agricultural University (Cadre) 2017 – 2018 Beijing, China

TECHNICAL SKILLS

- Language: Mandarin (Native), English (CET-6:547)
- Software: R, Proficient in Microsoft Office (Word, Excel, PowerPoint), ArcGIS, ENVI, Ecotect, Envi-met, CAD, PS, Lumion, Rhino, Sketchup, SPSS, Origin