QIN LI

www.linkedin.com/in/qin-li-54aa01283
Tel: 86-18504625283 | Email: qinli515@bjfu.edu.cn

RESEARCH INTERESTS

GISscience; Geo-AI; Spatiotemporal Big Data Analytics; Green Space; Digital Health Geography

Remote Sensing; GIS; Machine Learning; Deep Learning

EDUCATION

Beijing Forestry University (BFU) Beijing, China
Master of Engineering in Architecture *09/2023- 07/2026*
- Final GPA: 3.7/4

Beijing Forestry University (BFU) Beijing, China
Bachelor of Engineering in Landscape Architecture *09/2018-07/2022*
- Final GPA: 3.5/4

MANUSCRIPT

On Going:

"Assessment of Urban Green Space Equity in Beijing's Central Urban Villages: A Remote Sensing Perspective on Environmental Justice" Group Leader (With Wei Duan, Yutong Chen, Mengxiang Ma and Xiaodong Zheng; under review)

- Developed an equity evaluation framework to assess disparities in green space accessibility between Urban Villages (UVs) and Residential Quarters (RQs).
- Extracted residential districts, UV boundaries, and building footprints using ArcGIS and spatial data processing.
- Calculated per capita green space, NDVI (Normalized Difference Vegetation Index), and FVC (Fractional Vegetation Cover) across multiple buffer radii using remote sensing techniques and ArcGIS.
- Implemented Gini Index and Theil Index in Python to quantify inequities in urban greenery distribution.
- Designed data visualizations (boxplots, line charts, bar graphs) with ArcGIS and formatted the manuscript in LaTeX.
- UVs exhibited significantly lower green space accessibility, indicating structural inequities in urban planning.
- Findings contribute to environmental justice research and will be presented at AAG 2025.

In Progress:

"Evaluation of Satisfaction with Spontaneous Renovation in Urban Villages: The Case of Maquanying Village, Beijing" (With Wei Duan, Xiaodong Zheng)

- Assessed spatial connectivity and community satisfaction to inform urban development strategies.
- Analyzed 112 satisfaction survey responses using the SD (Semantic Differential) method, conducted KMO and Bartlett tests, and performed factor and reliability analysis (Cronbach's α) using SPSS.
- Examined population size and density changes over 20 years using ArcGIS.
- Assessed road depth, choice, and integration using DepthMapX Net 035.
- Modeled and analyzed two buildings within Maquanying Village to evaluate spatial depth, choice, and integration using DepthMapX Net 035.
- Identified low road network integration, highlighting potential barriers to mobility.
- Findings contribute to urban planning strategies aimed at improving connectivity and livability.

"Evolution of Urban Green Space in Guangzhou's Inner City Based on Remote Sensing" Group Member (With Yutong Chen, Weida Yin)

- Investigated long-term population shifts to understand urban green space development patterns.
- Led the GIS-based spatial analysis and supervised a team member in data processing and calculations.
- Utilized ArcGIS to conduct spatial interpolation, density analysis, and temporal mapping of population distribution over multiple years.

- Findings contribute to sustainable urban green space planning discussions and inform decision-making on land use and infrastructure development.

"Recent Advances in Urban Green Space Development Under the Context of Landscape Ecology: A Review" (With Fengfeng Kang, Xiaodong Zheng)

- Reviewed recent advancements in urban green space development to identify emerging trends and research gaps.
- Led literature screening, conducted keyword analysis, and contributed to manuscript writing.
- Analyzed 34 research papers (2018–2023) from Web of Science, examining journal distribution, research themes, and keyword co-occurrence patterns using CiteSpace.
- Insights contribute to landscape ecology research and inform sustainable urban planning strategies.

PUBLICATIONS AND CONFERENCE ACTIVITIES

Journal Articles:

Analysis of Energy-Saving Factors of Small Residential Buildings in Cold Regions Based on Design-Builder Simulation

Qin Li, Ligang Liu, Xiaodong Zheng (Accepted in Urbanism and Architecture)

- Investigated energy-saving strategies for small residential buildings in cold regions to enhance sustainability.
- Led building modeling and energy simulation, conducted comparative analysis, and contributed to data interpretation and manuscript writing.
- Modeled a typical residential building in Heilongjiang Province using Design Builder and simulated electricity consumption under different insulation levels, window-to-wall ratios, and HVAC system efficiencies.
- Identified optimal insulation thickness and facade configurations that can reduce heating energy, providing insights for sustainable building design.
- Findings contribute to energy-efficient building policies and inform future architectural design in cold climate regions.

Conference Activities:

Oral Presentation (In-Person): "Green Equity: An Assessment of Urban Green Space Equity in Beijing's Urban Villages Based on Remote Sensing" (Detroit, USA) *03/2025*

Conference: The American Association of Geographers' (AAG) Annual Meeting
Session: Urban Sensing and Understanding via Geospatial Big Data and AI

PROFESSIONAL AND RESEARCH EXPERIENCE

Harvard University Spatial Data Lab (SDL) – Center for Geographic Analysis Internship Program

Research Assistant *02/2025-6/2025*

Predicting Hospital Location Suitability in Tanzania Using Random Forest Machine Learning Integrated with Remote Sensing and GIS

Beijing "Three Hills and Five Gardens" Avian Monitoring Research (National Key Project)

Volunteer *09/2024-11/2024*

- Assisted in a national research project evaluating the impact of urban green spaces on avian diversity and behavior.
- Conducted 300+ avian surveys in Xishan and Xiangshan Parks, systematically recording species, population size, activity patterns, and habitat conditions.
- Utilized binoculars, sound recorders, and rangefinders to measure bird abundance, behavior, ambient noise levels, and human disturbances along designated transects and sampling points.
- Analyzed habitat characteristics (vegetation types, noise levels, and human activities) for 200+ bird species, assessing their distribution and behavioral responses in urban green spaces.
- Contributed to long-term biodiversity monitoring and provided insights for urban green space planning and conservation strategies.

Tsinghua Rural Revitalization Workstation – Academic Research Group (China)

Group Member *10/2023-10/2024*

- Refined and optimized 1,000+ rural survey questionnaires, ensuring alignment with research objectives and local contexts.
- Organized and managed the rural survey database, ensuring data accuracy and efficiency for further analysis.
- Evaluated field reports from 40+ investigation teams, providing insights for project refinement and ensuring consistency across diverse fieldwork.

WORKING EXPERIENCE

THU & BFU - SUSTAINABLE FUTURE CHALLENGE (SFC) (Zhangjiakou, China)

Group Member (Supervised by Prof. Wei Duan and Prof. Ning Zhu) *09/2023-present*

- Built a comprehensive database of 200+ native landscape plants in the Kangbao region, conducting research and fieldwork to gather data on species, habitat types, and growth conditions. Utilized Excel for data organization and analysis.
- Designed outdoor architectural landscapes incorporating biodiversity conservation principles with Rhino and D5, creating sustainable designs that promote native plant growth and habitat connectivity. Collaborated with the team to ensure environmental impact assessments were integrated into the design process.

Architectural Design & Research Institute of Tsinghua University (THAD) – Department of Architectural Programming and Design (Beijing, China)

Intern (Recommended by Prof. Ruoshi Zhang) *03/2024-06/2024*

- Developed a comprehensive design and planning database for 50+ global museum restoration centers, including architectural design features, historical preservation techniques, and restoration strategies. Utilized Excel and PowerPoint for data organization and presentation.
- Developed preliminary design models with Rhino and SketchUp for the Palace Museum Restoration Center (confidential project), conducting research and collaborating with senior designers.
- Conducted landscape design, 3D modeling, rendering, and proposal submission for the urban design bid of Yichang's new city center. Worked closely with the design team to develop visualizations and concepts that addressed both aesthetic and functional requirements with Adobe PhotoShop, Illustrator, Rhino and Enscape.
- Assisted in preliminary design, case studies, and site modeling for the National Tobacco Life Science Innovation Park (Beijing, China) with Rhino, researching urban planning precedents and contributing to the development of design concepts for the park's layout.

China Academy of Urban Planning & Design & BFU - Planning and Design of Mufu Mountain Scenic Area (Hunan, China)

Group Member (Advised by Prof. Wei Duan) *09/2023-09/2024*

- Developed comprehensive cultural and tourism planning for the Mufu Mountain scenic area, integrating local cultural heritage and tourism trends to create a sustainable development strategy. Conducted site visits and research to understand the cultural significance and tourism potential of the area.
- Designed and modeled rural architecture and landscapes, utilizing Revit, SketchUp, Rhino and Enscape to create detailed architectural plans and visualizations that harmonize with the natural environment. Contributed to developing landscape concepts that balance environmental preservation with tourism needs.
- Collaborated with the team to produce a final planning proposal, ensuring that the designs adhered to sustainable practices and met the client's expectations for community engagement and tourism development.

Beijing Tsinghua Tongheng Planning and Design Institute Limited – Deot. of Sustainable City Planning

Intern *04/2022-09/2024*

Evaluation of Important Wetlands and World Natural Heritage: Minjiang Estuary Wetland Study (Fujian, China)

- Developed a comprehensive case database of globally significant wetlands and natural heritage sites, synthesizing data on their ecological value, geographical features, and conservation status.
- Analyzed the ecological and geographical uniqueness of the Minjiang Estuary Wetland, including

biodiversity, habitat types, and environmental threats, contributing to conservation planning.
- Presented findings to stakeholders, highlighting the importance of protecting the Minjiang Estuary as a key ecological resource and natural heritage.

Biodiversity and Ecological Corridor Strategies for Xi'an Baqiao District's Ecological Parks (Xi'an, China)

- Developed a comprehensive database of 20+ ecological conservation projects and 10 habitat-specific conservation measures, supporting the formulation of effective biodiversity strategies for urban parks by integrating data from various online sources and organizing it in Excel.
- Managed a detailed avian biodiversity database with information on 200+ species across 7 ecological parks, facilitating monitoring and conservation planning. Used Excel to organize and analyze data trends.
- Analyzed ecological corridors and identified key areas for enhancing habitat connectivity, contributing to strategies for sustainable urban park development. Created spreadsheets to track ecological data and support strategic planning.

Ecological Research and Evaluation of Shifengxi National Wetland Park, Tiantai County (Zhejiang, China)

- Updated and expanded the Shifengxi faunal and floral database with data on 1,000+ species, including taxonomy, Latin names, behavioral traits, and conservation status, facilitating ongoing ecological monitoring. Utilized Excel for data management and analysis.
- Collected and synthesized information on the park's ecosystem evaluation, biodiversity, and cultural resources, and revised the planning document to reflect updated conservation strategies. Used GIS tools to map key biodiversity areas and analyze spatial data.
- Contributed to the development of comprehensive biodiversity management strategies, supporting sustainable conservation and ecological restoration efforts. Participated in team discussions, providing recommendations based on data analysis and field observations.

COMMUNITY SERVICE AND ACTIVITY IN ASSOCIATIONS

BFU & Stig L. Andersson & Danish Culture Center - China-Denmark International Workshop - *Notebook on Everyday Life in Beijing* 2024 (Danish Culture Center, 798 Art Street, Beijing, China)

10/2024-11/2024

Member of Show Designer (Under the guidance of Prof. Stig L. Andersson)

- Coordinated exhibition planning, execution, and reporting, collaborating with an international team to ensure smooth execution from concept to final setup.
- Designed and modeled exhibition structures and display methods using Rhino and Adobe Illustrator. The exhibition structure design and planning proposals were recognized and applied by Prof. Stig L. Andersson, contributing directly to the final exhibition layout.
- Produced the exhibition piece, "*Three-Day Life Documentary of Beijing's Migrant Youth*" (with Xue Shi), involving research, documentation, and presentation of migrant youth's daily lives.
- Led procurement and construction of exhibition components, including display structure installation, ensuring all materials were sourced and assembled according to specifications and deadlines.
- Conducted an interview with Prof. Stig L. Andersson for the official exhibition video.
- Received positive feedback from over 2000 attendees and contributed to the successful opening of the exhibition, enhancing cross-cultural dialogue on urban life and design.

BFU & the ICCROM-IUCN World Heritage Leadership – "Linking Culture and Nature: ICCROM-BFU Heritage & Landscape Conservation Lonference 2024" (Beijing, China) *05/2024-10/2024*

Volunteer (Advised by Lecturer Yukun Zhai)

- Designed the official conference logo using Adobe Illustrator and PhotoShop.
- Coordinated guest shuttle transportation, organizing schedules, routes, and timing to ensure smooth transportation for international guests, including contingency planning for potential issues.
- Assisted in hosting international guests such as Sarah Jane Brazil and Mesut Dinler, facilitating communication and ensuring their needs were met during the conference, providing a seamless experience

for high-profile participants.
- Received positive feedback from guests and organizers for the efficiency of transportation logistics and the professionalism in handling guest coordination, contributing to the overall success of the event.

THU - Global Knowledge LeiFeng *02/2023-05/2023*

Volunteer

- Organized and taught AI-generated art workshops as part of the Lei Feng AI Shared Learning Initiative, guiding participants through creating digital artworks using multiple AI tools, and explaining the integration of technology with artistic creativity.
- Video Editing Volunteer – Edited an interview video with ETH lecturer Zhao Ma, using Adobe Premiere Pro to ensure high-quality visuals and audio, and effectively presenting the interview's key points.
- Received positive feedback from workshop participants and Featured guest.

ORGANIZATIONS

Association of American Geographers - Student Member *2024-present*

Chinese Society of Landscape Architecture – Student Member *2023- present*

THU-Tsinghua Rural Revitalization Workstation (Academic Research Group) (Member) *2023- present*

BFU-Student Assistant Service Center - President *2019-2022*

- Chaired 3 general meetings, representing the organization in official reports to senior leadership, influencing student service policies.
- Organized 2 large-scale team-building activities for 40+ members, fostering collaboration and engagement.
- Led 20+ departmental meetings with a core team of 10 members, streamlining task coordination and execution.
- Conducted and analyzed 20+ market price surveys across 12 supermarkets on and off campus every two weeks, providing data-driven insights for student affordability initiatives.

BFU-Bio-Society Club – Department of Technology — Vice Minister *2018-2020*

- Organized and served as a judge for a pressed flower competition with 50+ participants.
- Led two plant and animal specimen-making (amber specimen) workshops for 30+ attendees.
- Conducted two guided campus plant recognition tours for 20+ participants, improving ecological awareness and field observation skills.

BFU-Student Assistant Group of the Party Committee Propaganda Department – Minister *2019-2021*

- Led the design and production of campus promotional posters to support university events and initiatives.
- Organized and supervised the creation of 40 staff ID badges.

SELECTED AWARDS AND HONORS

Graduate Academic Scholarship (top10%) *2024*

The first prize of "2021 fair of making" - The work "Red rock" of Beijing Forestry University (Member) *2021*

The third prize of the Tencent Fan Club Film Critic Competition *2018*

SKILLS AND INTERESTS

Programming: Python, Markdown, LaTeX

Geographic information systems: ArcGIS, Google Earth Engine, ENVI

Other Statistical Analysis: SPSS, DepthMapX Net 035, CiteSpace

Design & Visualization: AutoCAD, Revit, Grasshopper, SketchUp, Rhino, Cinema 4D, Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe Premiere, V-Ray, Lumion, Enscape, D5, Stable Diffusion

Language: Mandarin Chinese (native), English (fluent)

Interests: Movies, Photography, Skiing, Badminton, Travel, Piano, Guitar, Cycling, Baking, Cooking