

# Shiyan Sha

ORCID | Google Scholar | E-mail | Research Theme | Github

**Research Interests:** Climate Adaption and Resilience, Sustainable Urbanization, Scenario-based analysis, Policy Research, Geospatial analysis

## EDUCATION

### Harbin Institute of Technology (China)

Sep. 2021-Mar. 2024

- **Master** of Engineering in Urban and Rural Planning
- Average score: 86.4/100

### Hebei University of Technology (China)

Sep. 2016-Jun. 2021

- **Bachelor** of Engineering in Urban and Rural Planning
- Average score: 89.04/100 | Ranking: 2/58

## WORK EXPERIENCES

### Research Positions (GIS Analyst & Urban Planner)

Jun. 2024-Present

- Recognized as **Municipal Talent**, Shijiazhuang City. Conducted geospatial analysis and local government policy research, serving as head of the research unit and participating in decision-making processes related to sustainable infrastructure regeneration within urban-rural planning authorities.

## PUBLICATIONS

\* **Corresponding author**

- [1] Cheng, Q., & **Sha, S.\*** (2024). Last defense in climate change: Assessing healthcare inequities in response to compound environmental risk in a megacity in Northern China. ***Sustainable Cities and Society***, 115, 105886.  
<https://doi.org/10.1016/j.scs.2024.105886> (SCIE Q1 IF=12.0)
- [2] **Sha, S.**, Cheng, Q., & Lu, M.\* (2024). Building a “reservoir of social resilience”: A strategy for social infrastructure regeneration in shrinking cities based on social network analysis. ***Habitat International***, 143, 102991.  
<https://doi.org/10.1016/j.habitatint.2023.102991> (SSCI Q1 IF=7.0)
- [3] **Sha, S.**, & Cheng, Q.\* (2024). Built or Social environment? Effects of perceptions of neighborhood green spaces on resilience of residents to heat waves. ***Urban Forestry & Urban Greening***, 94, 128267.  
<https://doi.org/10.1016/j.ufug.2024.128267> (SCIE/SSCI Q1 IF=6.7)
- [4] **Sha, S.**, & Cheng, Q.\* (2024). Determining the effects of green space usage on health inequalities among residents of shrinking cities based on a social capital perspective. ***Urban Forestry & Urban Greening***, 97, 128375.  
<https://doi.org/10.1016/j.ufug.2024.128375> (SCIE/SSCI Q1 IF=6.7)
- [5] Cheng, Q., & **Sha, S.\*** (2024). Revealing the injustice and factors that affect the resilience responses of residents in the full period of heat waves. ***Sustainable Cities and Society***, 107, 105467.  
<https://doi.org/10.1016/j.scs.2024.105467> (SCIE Q1 IF=12.0)
- [6] Cheng, Q., & **Sha, S.\*** (2024). Resisting the heat wave: Revealing inequalities in matching between heat exposure risk and healthcare services in a megacity. ***Applied Geography***, 167, 103291.  
<https://doi.org/10.1016/j.apgeog.2024.103291> (SSCI Q1 IF=5.4)
- [7] Cheng, Q., **Sha, S.\***, & Cheng, W. (2023). Revealing the heterogeneity of social capital in shrinking cities from a social infrastructure perspective: Evidence from Hegang, China. ***Applied Geography***, 159, 103087.  
<https://doi.org/10.1016/j.apgeog.2023.103087> (SSCI Q1 IF=5.4)
- [8] Lu, M., **Sha, S.\***, & Cheng, Q. (2023). The Inspirations of Action-Oriented Social Infrastructure Regeneration Practices: A Case Study of Bayside City, Australia. ***Urban Planning International***.  
<https://doi.org/10.19830/j.upi.2023.077> (CSSCI/CSCD IF=4.5)
- [9] Bian, G., Gao, X., Zou, Q., Cheng, Q., Sun, T., **Sha, S.**, & Zhen, M.\* (2023). Effects of thermal environment and air quality on outdoor thermal comfort in urban parks of Tianjin, China. ***Environmental Science and Pollution Research***, 30(43), 97363-97376.

- [10] Bian, G., Cheng, Q., Yan, G., **Sha, S.**, & Zhen, M.\* (2024). Effects of landform and building layout on outdoor thermal environment: a case study of mountain villages in severely cold regions. *Journal of Asian Architecture and Building Engineering*, 1-31.

<https://doi.org/10.1080/13467581.2024.2389162>

(SCIE/AHCI IF=1.6)

## BOOK CHAPTERS

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### Science of Urban Systems

(National 14th Five-Year Plan Textbook for Urban-Rural Planning Education in China).

- Contributed over 100,000 words across core chapters on **urbanization processes and evaluation metrics, urban development laws and spatial governance, urban social systems and equity dimensions**, and **rural planning strategies**; coordinated cross-disciplinary editorial and content integration processes.

## CONFERENCE PRESENTATIONS

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- [1] **Sha, S.**, Lu, M., Meng, Q., & Xuan, L. (2022). Differentiation of family medical resources use of “New Citizens” from the perspective of health equity. *Proceedings of the 58th ISOCARP Congress*. Brussels, Belgium: ISOCARP.  
<https://doi.org/10.47472/z2r9J3Q4> (Presentation)
- [2] **Sha, S.**, Cheng, Q., & Lu, M.\* (2023). Theoretical responses and regeneration strategies for social infrastructure in shrinking cities. *Proceedings of the 2023 China Urban Planning Annual Conference (Volume 02: Urban Renewal)*, 15.  
<https://doi.org/10.26914/c.cnkihy.2023.055866> (Poster)
- [3] **Sha, S.**, Cheng, Q., Lu, M., & Cheng, W. (2023). Equity-oriented research on the characteristics of socio-spatial differentiation and governance strategies in shrinking cities. *Proceedings of the 59th ISOCARP Congress*. Toronto, Canada: ISOCARP.  
(Presentation)
- [4] **Sha, S.**, Cheng, Q., Lu, M., & Cheng, W. (2023). Improving social resilience in shrinking cities through social infrastructure regeneration: A investigation from Hegang, China. *Proceedings of the 59th ISOCARP Congress*. Toronto, Canada: ISOCARP.  
(Presentation)
- [5] **Sha, S.**, Cheng, Q., Lu, M., & Cheng, W. (2023). Characteristics of “Flash Mob” behavior and cultural transmission in public space based on an inclusive perspective: Evidence from Tianjin City, China. *Proceedings of the 59th ISOCARP Congress*. Toronto, Canada: ISOCARP.  
(Presentation)
- [6] **Sha, S.**, Cheng, Q., Lu, M., & Cheng, W. (2023). Spatial Distribution and Usage Characteristics of “Workers’ Harbor” from the Perspective of Opening and Sharing: A Case Study from Tianjin, China. *Proceedings of the 59th ISOCARP Congress*. Toronto, Canada: ISOCARP.  
(Presentation)
- [7] Cheng, Q., **Sha, S.**, Cheng, W., & Lu, M. (2023). The thermal environmental characteristics and climate-responsive planning of “Rural Communities” in severe cold regions: Evidence from Zhangjiakou, China. *Proceedings of the 59th ISOCARP Congress*. Toronto, Canada: ISOCARP.  
(Primary participant)
- [8] Cheng, Q., **Sha, S.**, Cheng, W., & Lu, M. (2023). Social infrastructure demand evaluation and planning policies of historical communities from a resilience perspective: Evidence from typical communities in Hebei, China. *Proceedings of the 59th ISOCARP Congress*. Toronto, Canada: ISOCARP.  
(Primary participant)
- [9] Cheng, Q., **Sha, S.**, Cheng, W., & Lu, M. (2023). Evaluation of urban community healing space demand and planning strategies from a health equity perspective: Evidence from Tianjin, China. *Proceedings of the 59th ISOCARP Congress*. Toronto, Canada: ISOCARP.  
(Primary participant)
- [10] Cheng, Q., **Sha, S.**, Cheng, W., & Lu, M. (2023). Comparison of the spatial and temporal distribution characteristics of the “Informal Economy” in the context of multi-sector collaboration and governance: Evidence from Tianjin, China. *Proceedings of the 59th ISOCARP Congress*. Toronto, Canada:

- [11] Meng, Q., Lu, M., **Sha, S.**, & Yang, Z. (2022). The thermal environmental characteristics and climate-responsive planning of “Rural Communities” in severe cold regions: Evidence from Zhangjiakou, China. *Proceedings of the 58th ISOCARP Congress*. Brussels, Belgium: ISOCARP.

<https://doi.org/10.47472/ZsRdcv5E>

(Participant)

## CERTIFICATES

### Reviewer for 10+ international journals (50+ peer reviews)

- For the following SCIE/SSCI journals (mostly JCR Q1):

*Sustainable Cities and Society* (SCIE JCR Q1), *Environmental Impact Assessment Review* (SCIE JCR Q1), *Cities* (SSCI JCR Q1), *International Journal of Disaster Risk Science* (SCIE JCR Q1), *Environmental Research* (SCIE JCR Q1), *Applied Geography* (SSCI JCR Q1), *BMC Public Health* (SCIE JCR Q1), *Urban Forestry & Urban Greening* (SCIE/SSCI JCR Q1), *Health & Place* (SCIE/SSCI JCR Q1), *International Journal of Digital Earth* (SCIE JCR Q1), *Heliyon* (SCIE JCR Q1), *Wellbeing, Space and Society* (SCIE JCR Q2)

Member of ISOCARP (International Society of City and Regional Planners)

Jun. 2023-Present

Co-founder of the “Yingcheng Society” (An urban studies academic society)

Dec. 2017-Present

## HONORS & AWARDS

- 2019, **Second prize (First Author)**, National Competition in Urban-rural Planning Discipline (China's highest competition for undergraduate students), Ministry of Education of the People's Republic of China, National level.
- 2019, **Third prize (First Author)**, National Competition in Urban-rural Planning Discipline (China's highest competition for undergraduate students), Ministry of Education of the People's Republic of China, National level.
- 2019, 2022, 2023, **First-class Scholarship (Top 5%)**, University level.
- 2021, **Outstanding Graduate Award (Top 3%)**, University level.
- 2024, **Outstanding Student Award (Top 5%)**, University level.
- 2025 Fall, **Jardine Foundation Postgraduate Scholarship Nominee**, University of Cambridge (Top 12 University-wide).

## RESEARCH EXPERIENCES

### Healthcare Facilities Layout Plan for Tianjin (2019-2035)

Dec. 2019-Sep. 2021

#### Core team member

- Conducted GIS-based spatial analysis to evaluate medical facility accessibility and service coverage; developed optimization strategies for facility distribution and funding allocation; collected, verified, and analyzed spatial and service-level data while establishing and maintaining a geodatabase to support evidence-based planning.

## SKILLS

### Research skills:

**Statistical Analysis Methods** (including descriptive statistics, regression and correlation analysis, cluster analysis, TOPSIS, difference analysis, and structural equation modelling); **Geospatial Analysis Methods** (including geospatial and GIS analysis, remote sensing techniques, and GeoAI applications); **Questionnaire and Interview Methods** (including questionnaire design, semi-structured interviews, and data organisation and coding); **Team Collaboration and Coordination Methods** (including practical project participation, project management, and teamwork)

**Communication skills:** Mandarin Chinese (*Native*); English (*Can read, write, speak, understand and peer review*)