

# 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

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<b>Harbin Institute of Technology (China)</b>	Sep. 2021-Mar. 2024
• <b>Master</b> of Engineering in Urban and Rural Planning	
• Average score: 86.4/100	
<b>Hebei University of Technology (China)</b>	Sep. 2016-Jun. 2021
• <b>Bachelor</b> of Engineering in Urban and Rural Planning	
• Average score: 89.04/100   Ranking: 2/58	

## WORK EXPERIENCES

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<b>Research Positions (GIS Analyst &amp; Urban Planner)</b>	<i>Jun. 2024-Present</i>
• Recognized as <b>Municipal Talent</b> , 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**

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- [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:

ISOCARP.

(Primary participant)

[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

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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

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- [1] 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.
- [2] 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.
- [3] 2019, 2022, 2023, **First-class Scholarship (Top 5%)**, University level.
- [4] 2021, **Outstanding Graduate Award (Top 3%)**, University level.
- [5] 2024, **Outstanding Student Award (Top 5%)**, University level.
- [6] 2025 Fall, **Jardine Foundation Postgraduate Scholarship Nominee**, University of Cambridge (Top 12 University-wide).

## RESEARCH EXPERIENCES

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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

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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*)