Fengrui Jing

Email: jingfr@mail2.sysu.edu.cn; or realjingfr@gmail.com
Phone: (+86) 15071029775
Birthday: November 11, 1992
Address: No. 135, Xingang Xi Road, Sun Yat-sen University, China
Nationality: China

RESEARCH BACKGROUND

Fengrui is a fresh PhD graduate in Geography (Cartography and Geographic Information Science), supervised by Prof. Dr. Lin Liu at University of Cincinnati. He is a member of AGA-YGWG (Asian Geographical Association - Young Geographer Working Group). His research interests focus on the relationship between urban environment and perception, namely,

- Environmental interaction and perception
- Spatiotemporal analysis based on multi-source data
- Theoretical and Methodological development pertaining to urban studies

EDUCATION

09/2017 – 06/2021: PhD student (Major: **Cartography and Geographic Information Science**), Sun Yat-sen University, Guangzhou China (Supervised by Prof. Dr. Lin Liu and Prof. Dr. Suhong Zhou)

09/2019 – 03/2020: Visiting PhD student (Department: **Crime & Wellbeing Big Data Centre**), Manchester Metropolitan University, Manchester UK (Supervised by Prof. Jon Bannister, FAcSS FRSA)

09/2014 – 06/2017: Master's student (**Physical Geography**), Shaanxi Normal University, Xi'an China

03/2012 – 06/2014: Undergraduate student (Minor, **Psychology**), Central China Normal University, Wuhan China

09/2010 – 06/2014: Undergraduate student (Major, **Social Work**), Central China Agricultural University, Wuhan China

PUBLICATIONS

Article in Review

Jing, F., Liu, L., & Zhou, S. (2021). How does Crime-specific Victimization Impact Fear of Crime in China? The Role of Neighborhood Characteristics. *International Journal of Offender Therapy and Comparative Criminology*. Recommended publication after revisions.

Peer-reviewed paper

Zhou, H., Liu, L., Lan, M., Zhu, W., Song, G., **Jing, F**., Zhong, Y., Su, Z., & Gu, X. (2021). Using Google Street View imagery to capture micro built environment characteristics in drug places, compared with street robbery. *Computers, Environment and Urban Systems*, 88, 101631.

Jing, F., Liu, L., Zhou, S., Song, J., Wang, L., Zhou, H., ... & Ma, R. (2021). Assessing the impact of street-view greenery on fear of neighborhood crime in Guangzhou, China. *International journal of environmental research and public health*, 18(1), 311.

Jing, F., Liu, L., Zhou, S., & Song, G. (2020). Examining the Relationship between Hukou Status, Perceived Neighborhood Conditions, and Fear of Crime in Guangzhou, China. *Sustainability*, 12(22), 9614.

Long, D., Liu, L., Feng, J., Zhou, S., & **Jing, F.** (2018). Assessing the Influence of Prior on Subsequent Street Robbery Location Choices: A Case Study in ZG City, China. *Sustainability, 10(6)*, 1818.

Jing, F., Sun, H., & Long, D. (2017). Tourist experience elements structure characteristics analysis of Xixi National Wetland Park based on web text. *Journal of Zhejiang University (Science Edition)*, 44(5): 623-630. (In Chinese)

Jing, F., Sun, H., & Yuan, C. (2017). Spatial structure analysis of tourism resource attraction in Chengdu, *Resources Science*, 39(2): 303-313. (In Chinese)

Jing, F. & Sun, H. (2016). Evaluation of the recreation experience value of urban wetland parks from a visitor perspective: a case of Baqiao Wetland Park in Xi'an city. *Journal of Shaanxi Normal University (Science Edition)*, 44(3): 110-117. (In Chinese)

Jing, F., Sun, H., Yuan, C., Liu Y., & Wang, H. (2015). The Dynamic Network Research of Tourism Economic Relations Based on Social Network Analysis—case of Shaanxi Province. *Journal of Xianyang Normal University*, 76-82. (In Chinese)

Thesis

Fengrui Jing (2021). Street-view microenvironmental correlates, influencing mechanism, and spatial simulation of residents' fear of crime. *PhD thesis*. Sun Yat-sen University.

Fengrui Jing (2017). Tourism resources evaluation and spatial structure analysis of Chengdu city based on Interenet open data. *Master's thesis*. Shaanxi Normal University.

Patent

Lin Liu, **Fengrui Jing,** Suhong Zhou, & Kai Liu (2019). A method of measuring the multi-dimensional neighborhood disorder. Publication No：CN111008657A

Software

Participant (2021). Online evaluation software of urban street view and safety perception V1.0. license No：2021SR0564382

PRESENTATIONS

Jing, F. & Liu, L. 2020. Examining the Relationship between Hukou Status, Perceived Neighborhood Conditions, and Fear of Crime in Guangzhou, China. **Public Safety and Health & "2020 Urban Health Theory, Method and Application" Seminar**, Guangzhou, China. (Online)

Jing, F. & Liu, L. 2019. The Effect of Natural Outdoor Environment on the Link of Victimization-Fear: Contrasts between the Green and Blue Space. **2019 Joint Conference on Environmental Criminology and Crime Analysis and the 6th International Conference on Crime Geography and Crime Analysis**, Guangzhou, China. (Poster)

Jing, F., Liu, L., Liu, W., Zhou, S., & Long, D. 2019. Is fear of crime mediated by the presence of surrounding blue space? **2019 annual meeting of the American Association of Geographers (AAG)**, Washington D.C., US.

Jing, F. & Liu, L. 2018. Assessing how Neighborhood Disadvantages Moderate the Relationship between Criminal Victimization and Fear of Crime. **The 5th International Conference on Crime Geography and Crime Analysis**, Guangzhou, China.

ON-GOING PAPER INVOLVING THE PHD THESIS

The Mechanism between outdoor natural environment, perceived neighborhood conditions and fear of crime

Abstract:

Only a few research have analyzed the inner mechanism between objective environment, perceived environment, and fear of crime. So far, there has been no research to study the relationship between microenvironment based on street-view, perceived environment, and fear of crime. Using the Structural Equation Model, we analyzed the moderated and mediated relationships between objective neighborhood disorder, perceived neighborhood disorder and fear of crime. The results showed that street-view greenery partly influenced the fear of crime through perceived neighborhood physical disorder. Victimization experience can foster the impact of street-view greenery and sky index on fear of crime. Our research helped to further understand the relationship between objective neighborhood disorder, perceived neighborhood disorder and fear of crime.

Measuring the objective neighborhood disorder: the comparison between different street-view factors

Abstract:

Neighborhood disorder is considered to be an essential factor to predict fear of crime. Traditional methods always use questionnaires to measure perceived neighborhood disorder. In this study, we obtained different objective neighborhood disorder factors, namely, green view index, street-view aesthetic index, street-view wealth index, and street-view garbage index. Taking the fear of crime as the dependent variable, and the related individual- and neighborhood-level factors as the coefficient variables, we compared the significance level and model fitness using different neighborhood disorder factors, separately. Then, we compared the impact of green view index in local neighborhoods and surrounding areas on fear of crime using spatial lags method. The results showed that among the four objective neighborhood disorder factors, only green view index is a significant factor, and its model has the best performance. Our research illustrates an approach to measure objective neighborhood disorder in the fear of crime research.

Measuring neighborhood-level fear of crime in Guangzhou through multi-source data

Abstract:

To measure fear of crime in a certain area, a common method is to conduct questionnaires among residents and calculate the average fear of crime value in this area. However, the disadvantages of this method are high cost, difficulty in a large-scale operation, and low temporal resolution. In the big data era, multi-source urban data is extremely rich. We developed a method to measure fear of crime at the neighborhood level. First, using survey data and neighborhood environment data, we conducted two non-linear and one linear models to train the predicting model of individual-level fear of crime. After obtaining the fear of crime predicting model, we simulated the individual-level demographic data related to fear of crime in the whole Guangzhou city, and combined it with the neighborhood-level data related to fear of crime to predict all residents' fear of crime level. Finally, we aggregated individual fear of crime to the neighborhood level, obtained the fear of crime at neighborhood-level in Guangzhou, and verified the prediction accuracy.

RESEARCH PROJECTS

Safety Perception Assessment and Response Based on Big Data (05/2018 to 06/2021)

Project Leaders: *Prof. Lin Liu and Prof. Suhong Zhou*

This project is a **sub-project** of the National Key R&D Program "Construction of Urban Public Safety Stereo Network and Demonstration of Emergency Response" (CUPSSNDER), which is funded by the Chinese Ministry of Science and Technology. Total Funding: ￥23,000,000 (about £2,626,830).

Background

The traditional method of measuring neighborhood-level fear of crime is to use questionnaires, but the questionnaires may not cover all neighborhoods. Our approach aims to use multi-source big data for deriving detailed neighborhood environment characteristics. Using machine learning methods, the relationship between neighborhood characteristics and neighborhood safety perception can be established.

Role in the project

I am a key member in this project. I participated in the application and implementation for this project. Based on this project, I published two peer-reviewed paper and developed a patent.

Design of Social Safety Evaluation System (09/2018 to 12/2018)

Project Leaders: *Prof. Lin Liu and Prof. Suhong Zhou*

This project is funded by Guangzhou Politics and Law Committee￥100,000 (about £11,433).

Background

Social safety is associated with social stability and the happiness of residents, and is a concerned topic for policy maker. At present, Guangzhou lacks a dynamic, scientific, and comprehensive social safety index system. We planed to establish a social safety index system which includes five parts, public safety, traffic safety, environment safety, public health safety, and safety of production and life. The data of this index system from different government departments.

The evaluation result can be used to government management, neighborhood improvement and risk prevention.

Role in the project

I am a key member in this project. I contributed to the application and implementation of this project, including drafting proposal and final reports.

EMPLOYMENT

03/2016 – 06/2016: Beijing Tsinghua Tongheng Planning and Design Institute
Innovation Center for Technology
Urban researcher (intern)
Duties/Responsibilities: Using big data to study urban development, planning and management services, focusing on urban issues in the areas of population, space, transportation, housing, etc.

SKILLS

Software: ArcGIS, R, Python, SPSS, HLM, MATLAB, STATA, GEODA, ENVI
Strengths: Statistics, GIS, Machine Learning, Spatial Analysis, Image Processing, Cartography/Remote Sensing
Others: Driver license

HONORS

2019 Funded by the international program for PhD candidates, Sun Yat-sen University
2016 Second-class Houde Scholarship, Shaanxi Normal University
2015 First-class Yuanding Scholarship, Shaanxi Normal University

ACTIVITIES

2011-2013 President of Creativity and Design Association of Central China Agricultural University

INTERESTS

- Table Tennis, Hiking, Badminton, & Cycling
- Travel, Collections, & Chatting