

# ***Lirong Yin***, Master of Science in Geography

*Department of Geography & Anthropology,  
College of Humanities & Social Sciences,  
Louisiana State University*

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## ***Professional Objective***

Acquired a Master of Science in Geography from Louisiana State University and a Bachelor of Science in Geography Information Science from the University of Iowa, I possess geo-data processing and information analysis skills. I am well experienced in programming and database design as a geo-analyst. Having a multi-culture background and multi-field education experience, I would be fit for multidiscipline studies and projects. I am seeking for the opportunity of the Ph.D. program in geography, with a study interest in Geography Information Science, remote sensing, server weather and climate change, Coastal environment, natural hazard and disaster, and coupled human and natural dynamic system.

## *Research interests*

- Geographic and Climatic Cycling
- Earth Surface Process and Management
- Climate Changing and Management
- Natural Disaster and Human Disaster
- Coupled Human and Nature Dynamic System
- Machine Learning and Deep Learning
- Remote Sensing and Image reasoning
- Space Analysis and Computational intelligence

## *Skills*

- Geo-Visualization Through JSON
- Mapping and Spatial Analysis (ArcGIS)
- Programming and Data Process Through Python
- Imagine Analysis (Erdas Imagine)
- Information Analysis (MATLAB)
- Geographic Field Monitoring
- Data Analysis (Deep Learning, Machine Learning)
- Database Design (PostgreSQL And ArcGIS)
- SPSS and Excel Statistical analysis and data visualization

## *Experience*

2020.8— Present Teaching Assistant at Department of Geography and  
Anthropology, Louisiana State University

2019.5—2019.8 Researching Assistant in the Research Center for Machine  
Perception and Intelligent System at University of Electronic  
Science and Technology of China

2016.2 —2017.1 Researching Assistant in the Research Center for Machine  
Perception and Intelligent System at University of Electronic  
Science and Technology of China

2013.7 —2014.7 Researching Assistant in the Research Center for Machine  
Perception and Intelligent System at University of Electronic  
Science and Technology of China

## *Education History*

2019.8 -2020.12 M.S. Geography. Department of Geography & Anthropology,  
Louisiana State University (planned defense data Oct 6, 2020)

2017.1 -2019.5 B.S. Geography Information Science. The University of Iowa,  
Geographical and Sustainability Science Department, School of  
Liberal Art and Science, University of Iowa

- 2016.2 -2017.1 Dismissal from school for one year
- 2014.8 -2016.1 B.S. Geography Information Science. University of Iowa
- 2013.7 -2014.7 For application united states university and preparing IBT exam after dropping out from (UESTC)
- 2012.8 -2013.6 Suspension of schooling (traveling in the U.S. Across more than 20 states including 20 National Parks and Barrow, Alaska)
- 2011.9 -2012.7 Undergraduate in University of Electronic Science and Technology of China(UESTC)

## ***Publications of Peer-Reviewed Journals***

1. Li, Xiaolu, **Lirong Yin\***, Li Yao, Wenping Yu, Xiaojun She, and Wei Wei. "I Seismic spatiotemporal characteristics in the Alpide Himalayan Seismic Belt." *Earth Science Informatics* volume 13, pages883–892(2020)
2. Tang, Yushan, Shan Liu, Xiaolu Li, Yulin Fan, Yaru Deng, Yan Liu, and **Lirong Yin\***. "Earthquakes spatio–temporal distribution and fractal analysis in the Eurasian seismic belt." *Rendiconti Lincei. Scienze Fisiche e Naturali* 31, no. 1 (2020): 203-209.
3. Chen, Xiaobing, **Lirong Yin**, Yulin Fan, Lihong Song, Tingting Ji, Yan Liu, Jiawei Tian, and Wenfeng Zheng. "Temporal evolution characteristics of PM2. 5 concentration based on continuous wavelet transform." *Science of The Total Environment* 699 (2020): 134244.
4. Tang, Yushan, Shan Liu, Yaru Deng, Yuhui Zhang, **Lirong Yin**, and Wenfeng Zheng. "Construction of force haptic reappearance system based on Geomagic Touch haptic device." *Computer Methods and Programs in Biomedicine* 190 (2020): 105344.
5. **Yin, Lirong**, Xiaolu Li, Wenfeng Zheng, Zhengtong Yin, Lihong Song, Lijun Ge, and Qingchuan Zeng. "Fractal dimension analysis for seismicity spatial

and temporal distribution in the circum-Pacific seismic belt." *Journal of Earth System Science* 128, no. 1 (2019): 22.

6. Ding, Yueming, Xia Tian, **Lirong Yin**, Xiaobing Chen, Shan Liu, Bo Yang, and Wenfeng Zheng. "Multi-scale Relation Network for Few-Shot Learning Based on Meta-learning." In *International Conference on Computer Vision Systems*, pp. 343-352. Springer, Cham, 2019.
7. Ni, Xubin, **Lirong Yin**, Xiaobing Chen, Shan Liu, Bo Yang, and Wenfeng Zheng. "Semantic representation for visual reasoning." In *MATEC Web of Conferences*, vol. 277, p. 02006. EDP Sciences, 2019.
8. Li, Xiaolu, Wenfeng Zheng, **Lirong Yin**, Zhengtong Yin, Lihong Song, and Xia Tian. "Influence of social-economic activities on air pollutants in Beijing, China." *Open Geosciences* 9, no. 1 (2017): 314-321.
9. Zheng, Wenfeng, Xiaolu Li, **Lirong Yin**, Zhengtong Yin, Bo Yang, Shan Liu, Lihong Song, Yu Zhou, and Yanhong Li. "Wavelet analysis of the temporal-spatial distribution in the Eurasia seismic belt." *International Journal of Wavelets, Multiresolution and Information Processing* 15, no. 03 (2017): 1750018.
10. Li, Xiaolu, Wenfeng Zheng, Nina Lam, Dan Wang, **Lirong Yin**, and Zhengtong Yin. "Impact Of Land Use On Urban Water-Logging Disaster: A Case Study Of Beijing And New York Cities." *Environmental Engineering & Management Journal (EEMJ)* 16, no. 5 (2017).
11. Li, Xiaolu, Nina Lam, Yi Qiang, Kenan Li, **Lirong Yin**, Shan Liu, and Wenfeng Zheng. "Measuring county resilience after the 2008 Wenchuan earthquake." *International Journal of Disaster Risk Science* 7, no. 4 (2016): 393-412.
12. Zheng, Wenfeng, Xiaolu Li, **Lirong Yin**, and Yali Wang. "The retrieved urban LST in Beijing based on T.M., HJ-1B and MODIS." *Arabian Journal for Science and Engineering* 41, no. 6 (2016): 2325-2332.
13. Zheng, Wenfeng, Xiaolu Li, **Lirong Yin**, and Yali Wang. "Spatiotemporal heterogeneity of urban air pollution in China based on spatial analysis." *Rendiconti Lincei* 27, no. 2 (2016): 351-356.
14. Zheng, Wenfeng, Xiaolu Li, Jinxin Xie, **Lirong Yin**, and Yali Wang. "Impact of human activities on haze in Beijing based on grey relational analysis." *Rendiconti Lincei* 26, no. 2 (2015): 187-192.
15. Li, Xiaolu, Wenfeng Zheng, Dan Wang, **Lirong Yin**, and Yali Wang. "Predicting seismicity trend in southwest of China based on wavelet analysis." *International Journal of Wavelets, Multiresolution and Information Processing* 13, no. 02 (2015): 1550011.

## *B.S. certificate from the University of Iowa*



## *GRE Scores for the General Test*

*Taken on July 15, 2018*

Verbal Reasoning 153, Quantitative Reasoning 167 Analytical Writing 3.5

## *TOEFL iBT Score*

*Test Date: Nov 17, 2018*

Reading 28    Listening 28    Speaking 24    Writing 23    Total 103

## Graduate course grades and GPA

Spring 2020							
Courses							
Dept	Course Number	Section	Session	Grade	Hours Carried	Hours Earned	Quality Points
ENGL	1051	002		P		3.00	
GEOG	4015	001		A+	3.00	3.00	12.90
GEOG	7911	001		A	3.00	3.00	12.00
GEOG	7936	001		B+	3.00	3.00	9.90
GEOG	7975	001		A+	3.00	3.00	12.90
Totals							
				Hours Carried	Hours Earned	Quality Points	GPA
<b>Semester Totals</b>				12.00	15.00	47.70	3.975
<b>LSU System Totals</b>				25.00	25.00	98.80	3.952
<b>Overall Totals</b>				25.00	25.00	98.80	3.952



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Fall 2019							
Courses							
Dept	Course Number	Section	Session	Grade	Hours Carried	Hours Earned	Quality Points
GEOG	4014	001		A	3.00	3.00	12.00
GEOG	4044	001		A	3.00	3.00	12.00
GEOG	7901	001		A	1.00	1.00	4.00
GEOG	7902	001		A-	3.00	3.00	11.10
GEOG	7917	001		A	3.00	3.00	12.00
Totals							
				Hours Carried	Hours Earned	Quality Points	GPA
<b>Semester Totals</b>				13.00	13.00	51.10	3.930
<b>LSU System Totals</b>				13.00	13.00	51.10	3.930
<b>Overall Totals</b>				13.00	13.00	51.10	3.930



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**Planned defense date:**

**OCT 06 2020**

**Thesis Title**

**The correlation analysis of the precipitations and river discharge with the injection and discharge of The Three Gorges Dam and Reservoir**

## Abstract

The Yangtze River has been the primary support of the resources and transportation of China. The River Basin covers an area of 1.8 million square kilometers. The Three Gorges Dam and Reservoir on the Yangtze River is one of the largest dams in the world. After the finish of dam construction in 1997, the reservoir started injecting the reservoir to a size of over 600 square kilometers. The influence caused by the dam and reservoir on the river system has been overwhelming and destructive. The possible influence of this vast water body and the operation to maintain the size and water level of this waterbody on the river system is significant and ominous.

In order to study the possible relation between the dam construction and the dam water operation, this study takes the dam injection (1998-2018) and discharge data (2003-2018), the precipitation from ground stations along the Yangtze River (1952-2020), and the river discharge raster map (1998-2018) to study the possible change in their annual patterns and the coherence between the different datasets. The methods used in this study are wavelet analysis and wavelet coherence analysis. The results of this study show a high coherence between the dam operation and river discharge and a minor and seasonal coherence between the dam operation and precipitation, and a change precipitation pattern after the construction of the dam and reservoir.

**Key Words** *Three Gorges Dam, the Yangtze river, precipitation, dam and reservoir, wavelet analysis, wavelet coherence, climate change, CHANS*