Wei Zhai

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Research Interests: Urban Resilience; Social Vulnerability; Spatial Data Science; GeoAI

EDUCATION

2017-Present: Ph. D. Candidate in Urban and Regional Planning, University of Florida, FL, USA.

- Advisor/Committee Chair: Prof. Zhong-Ren Peng (Urban Planning)
- Committee Members: Prof. Kevin Ash (Geography), Prof. Damon Woodard (Computer Engineering), Prof. Yan Wang (Urban Planning)

2017-2020: Master's Degree in Electrical and Computer Engineering, University of Florida, FL, USA.

- GPA:3.9/4.0 (Courses: Machine Learning; Computer Vision; Natural Language Processing; Deep Learning; Pattern Recognition)

2015-2017: Master's Degree in Urban Planning, Tsinghua University, Beijing, China. (Excellent Thesis Award)

- Advisor: Prof. Chaolin Gu

2010-2015: Bachelor's Degree in Urban Planning, Hunan University, Changsha, China. (Highest Distinction)

- GPA:3.91/4.5

JOURNAL PAPERS

1. **Zhai, W**. *, Liu, M., Fu, X., Peng, Z.R. (2021). American Inequality Meets COVID-19: Uneven Spread of the Disease across Communities. *Annals of the American Association of Geographers*. (Forthcoming)
2. Fu, X., & **Zhai, W. (Corresponding Authors)** (2021). Examining the spatial and temporal relationship between social vulnerability and stay-at-home behaviors in New York City during the COVID-19 pandemic. Sustainable cities and society, 102757. (https://www.sciencedirect.com/science/article/pii/S2210670721000512)
3. Yuan, F., Li, M., Liu, R. *, **Zhai, W.**, Qi, B. (2021). Social Media for Enhanced Understanding of Disaster Resilience during Hurricane Florence. *International Journal of Information Management*. (https://www.sciencedirect.com/science/article/pii/S0268401220314882)
4. **Zhai, W.**, Peng, Z. R.* (2020). Damage assessment using Google Street View: Evidence from Hurricane Michael in Mexico Beach, Florida. *Applied Geography*. (https://doi.org/10.1016/j.apgeog.2020.102252)
5. **Zhai, W.**, Peng, Z. R. *, & Yuan, F. (2020). Examine the effects of neighborhood equity on disaster situational awareness: Harness machine learning and geotagged Twitter data. *International Journal of Disaster Risk Reduction*, 101611. (https://doi.org/10.1016/j.ijdrr.2020.101611)
6. **Zhai, W.,** Liu, M., & Peng, Z. R. * (2020). Social distancing and inequality in the United States amid COVID-

19 outbreak. *Environment and Planning A: Economy and Space*, 0308518X20932576. (https://doi.org/10.1177/0308518X20932576)

7. **Zhai, W.,** Peng, Z. R. ***** (2020). Where to buy a house in the United States amid COVID-19? *Environment and Planning A: Economy and Space*, 0308518X20946041. (https://doi.org/10.1177/0308518X20946041)
8. Bai, X., **Zhai, W. (Corresponding Authors)**, Steiner, R. L., & He, Z. (2020). Exploring extreme commuting and its relationship to land use and socioeconomics in the central Puget Sound. *Transportation Research Part D: Transport and Environment*, 88, 102574. (https://doi.org/10.1016/j.trd.2020.102574)
9. **Zhai, W**., Bai, X., Shi, Y., Han, Y., Peng, Z. R. *****, & Gu, C. (2019). Beyond Word2vec: An approach for urban functional region extraction and identification by combining Place2vec and POIs. *Computers, Environment and Urban Systems*, 74, 1-12. (https://doi.org/10.1016/j.compenvurbsys.2018.11.008)
10. **Zhai, W.**, Bai, X., Peng, Z. R. *****, & Gu, C. (2019). From edit distance to augmented space-time-weighted edit distance: Detecting and clustering patterns of human activities in Puget Sound region. *Journal of Transport Geography*, 78, 41-55. (https://doi.org/10.1016/j.jtrangeo.2019.05.003)
11. **Zhai, W.**, Bai, X., Peng, Z. R. *****, & Gu, C. (2019). A bottom-up transportation network efficiency measuring approach: A case study of taxi efficiency in New York City. *Journal of Transport Geography*, 80. 102502. (https://doi.org/10.1016/j.jtrangeo.2019.102502)
12. Gu, C., Ye, X. *****, Cao, Q., Guan, W., Peng, C., Wu, Y., & **Zhai, W.** (2020). System dynamics modelling of urbanization under energy constraints in China. *Scientific Reports*, *10*(1), 1-16. (https://doi.org/10.1038/s41598-020-66125-3)

BOOK REVIEW

- **Zhai, W**. (2018). How to Kill a City: Gentrification, Inequality, and the Fight for the Neighborhood, by Peter Moskowitz. *Journal of the American Planning Association*, 84(2), 203-203. (https://doi.org/10.1080/01944363.2018.1429760)

BOOK /BOOK CHAPTER

- Gu, C., Gehard, O., **Zhai, W**., Feng, G. (2016). Introduction to Human Geography. Science Presse. Beijing, China. (In Chinese)

MANUSCRIPTS UNDER REVIEW (* CORRESPONDING AUTHOR)

1. **Zhai, W**. *****, Bai, X. (2020). Prototypical Resilience Projects for Post-disaster Recovery Planning: From Identification to Implementation. *Journal of Planning Education and Research*. (Major Revision)
2. **Zhai, W**. *****, Fu, X., Liu, M., Peng, Z.R. (2020). The impact of ethnic segregation on the compliance with social distancing amid COVID-19: A 45-million-person investigation. *Urban Studies.* (Under Review)
3. Bai, X., **Zhai, W**. *****, Steiner, R. (2020). Beyond Walking within the Neighborhood——How Have Smart Growth Strategies Affected the Travel Behavior of Older Adults? *Journal of Planning Education and Research*. (Minor Revision).

TEACHING

University of Florida, Dept. Urban and Regional Planning, Gainesville, FL

- **Co-instructor**. 2021, Graduate Level, Course: URP 6821 Transportation and Land Use Model
- **Co-instructor**. 2019, Graduate Level, Course: URP 6821 Transportation and Land Use Model (Evaluation 4.75/5.0)
- **Guest Lecturer**. 2020, Graduate Level, Course: DCP Doctoral Core 4. Topic: How to be productive as a Ph.D. student
- **Guest Lecturer**. 2020, Graduate Level, Course: Doctoral Core 3: Dissertation Preparation. Topic: Publish journal papers and apply for a grant
- **Guest Lecturer**. 2020, Graduate Level, Course: DCP7911 Advanced Design, Construction and Planning Research II. Topic: Machine Learning and Big Data for Urban Studies
- **Guest Lecturer**. 2020, Graduate Level, Course: DCP 7794 Doctoral Seminar. Topic: Quantitative Analysis for Urban Resilience
- **Guest Lecturer**. 2019, Graduate Level, Course: DCP 7794 Doctoral Seminar. Topic: Analytic methods for Literature Review

Tsinghua University, Dept. Urban Planning, Beijing, China

- **Teaching Assistant**. 2016, Undergraduate Level, Course: Introduction to Human Geography.

RESEARCH PROJECTS

PI , Microsoft AI for Earth Grant (2020.11-2021.11), (10,000 USD)

- Prediction of American's Mobility under Extreme Weather Events using Artificial Intelligence (funded by Microsoft).

Co-PI , Changchun Department of Planning (2017.01-2017.07), (600,000RMB=85,000 USD)

- The role of China's northeastern cities in the global city network (funded by Changchun Department of Planning).

Research Assistant, University of Florida (2017.09-2020.07),

- Examining data needs and implementation process of AV-based microtransit service: A case study in Lake Nona (funded by Florida Department of Transportation).
- Evaluating the effectiveness and funding mechanism of the Downtowner service in Tampa, Florida for statewide application (funded by Florida Department of Transportation).
- Evaluating the connection between transit and TNCs (Transportation Network Companies) in Pinellas County for statewide application (funded by Florida Department of Transportation).

Research Assistant, Tsinghua University (2015.09-2017.05)

- Interactive Coupling System Model of Urbanization and Ecological Environment in Mega-Cities. (funded by

National Natural Science Foundation of China).

- Strategic Research on Global Urbanization and China's Urban System Development. (funded by Ministry of Housing and Urban-Rural Development of China).

VOLUNTARY SUPERVISION OF STUDENTS

- Haoming Qin, Master's student in Urban and Regional Planning, University of Florida. Thesis supervision
  Thesis title: *The impact of Transit-TNCs Partnership on Transit Ridership in Pinellas County*
- Yixuan Cao, Master's student in Urban and Regional Planning, University of Florida. Thesis supervision
  Thesis title: *Cost-benefit analysis of Transit-TNCs Partnership in Pinellas County*

ACADEMIC AWARDS&SCHOLARSHIP

1. **Best Poster Award, 2020 DCP Research Symposium** at University of Florida, 2020
2. **Outstanding International Student Award** from University of Florida, 2020
3. **Travel Awards** from the Association of Collegiate Schools of Planning, 2020
4. **Travel Awards** from Spatial Data Science Symposium at University of California, Santa Barbara, 2019
5. **Excellent Award** in Urban Design Competition (Awarded by National Steering Committee of Urban and Rural Planning Education), Shen Zhen, China, 2014.
6. **Excellent Award** in Urban Transportation Competition (Awarded by National Steering Committee of Urban and Rural Planning Education), Shen Zhen, China, 2014.
7. **First Prize** (top 1.5%) in 11th Excellent Design Exhibition of Hunan Province, 2014.
8. **TianAn-ShuiShi Enterprise Scholarship**, 2015.
9. **National Scholarship** (top 3%) (Awarded by The Ministry of Education of China), 2014.
10. **First Prize Scholarship of Hunan University** (top 10%), 2012.
11. **National Scholarship** (top 3%) (Awarded by The Ministry of Education of China), 2011.

PRESENTATIONS&TALK

1. **AI for Earth Digital summit, November 2020**. Prediction of American's Mobility under Extreme Weather Events using Artificial Intelligence. Online Conference.
2. **ACSP, November 2020**. Prototypical resilience projects for post-disaster recovery planning. Online Conference.
3. **Spatial Data Science Symposium 2019 at UCSB, December 2019.** Santa Barbara, CA, USA.
4. **UF DCP Doctoral Program Orientation, September 2019**. Publishing as a junior doctoral student. Gainesville, FL, USA.
5. **ACSP, October 2019**. Moderator/discussant of the session: Land use and transportation connections. Greenville, SC, USA.
6. **ACSP, October 2018**. Measure the local and global commuting efficiency: An exploratory analysis of taxi commuting in New York City. Buffalo, NY, USA.
7. **AAG, April 2018.** An approach for urban functional region identification and extraction: Combining Word2vec model and multisource data. New Orleans, LA, USA.

SERVICE

Peer Review for **Annals of the American Association of Geographers**

Peer Review for **Cities**

Peer Review for **Travel Behavior and Society**

NEWS MEDIA

1. URP News, University of Florida. 2020. A team led by URP doctoral candidate Wei Zhai and Professor Zhong-Ren Peng received a prestigious Microsoft grant to understand human mobility during extreme weather events. https://dcp.ufl.edu/urp/microsoft-ai-for-earth-grant/
2. iAdapt News, University of Florida. 2020. https://dcp.ufl.edu/iadapt/poor-and-black-neighborhoods-express-different-attitudes-towards-the-hurricane/
3. iAdapt News, University of Florida. 2020. The Change of Mobility in Poor and Wealthy Counties in the United States Amid Covid-19 Outbreak. https://dcp.ufl.edu/iadapt/hello-world-2/
4. URP News, University of Florida. 2019. Measuring Citywide Transportation Efficiency https://dcp.ufl.edu/urp/measuring-citywide-transportation-efficiency/

SOFTWARE&TOOL

- Programming: Python, R, Matlab, Java
- Design Software: Sketchup, 3Dmax, Lumion, Photoshop, AutoCAD
- GIS and Transportation: ArcGIS, QGIS, Cube, PTV Visum