CURRICULUM VITAE [Updated on Aug 2, 2024]
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07/1988—

3. JOURNAL ARTICLES AND BOOK CHAPTERS (total = 165)

3a. Refereed Journal Articles in English (total = 127)
[**F Wang** in **bold** indicates **corresponding author**]

Wang, C., T. Onega, and **F. Wang**. 2024. Overlapping cancer service areas: Delineation and implications. *Transaction in GIS* 28: 604–622. https://doi.org/10.1111/tgis.13140

Liu, L., X. Fu, T. Kötter, K. Sturm, C. Haubold, W. W. Guan, S. Bao, and **F. Wang**. 2024. Geospatial Analytics Extension for KNIME. *SoftwareX* 25: 101627. https://doi.org/10.1016/j.softx.2023.101627

Liu, L., **F. Wang**, X. Fu, T. Kötter, K. Sturm, W. W. Guan, S. Bao. 2024. Elevating the RRE frameworv8T

Kang, C., L. Shi, F. Wang, Y. Liu. 2020. How urban places are visited by social groups? Evidence from matrix factorization on mobile phone data. *Transactions in GIS* 24: 1504-1525. DOI: 10.1111/tgis.12654

Kuai, X. and **F. Wang**. 2020. Global and localized neighborhood effects on public transit ridership in Baton Rouge, Louisiana. *Applied Geography* 124: 102338. DOI: 10.1016/j.apgeog.2020.102338

Jia, P., F. Wang, and I. Xierali. 2020. Evaluating the effectiveness of the Hospital Referral Region (HRR) boundaries: a pilot study in Florida. *Annals of GIS* 26: 251–260. DOI: 10.1080/19475683.2020.1798509

Hu, Y., C. Wang, R. Li, **F. Wang**. 2020. Estimating a large drive time matrix between zip codes in the United States: A differential sampling approach. *Journal of Transport Geography* 86: 102770. DOI: 10.1016/j.jtrangeo.2020.102770. PMC7363032.

Wang, F., C. Wang, Y. Hu, J. Weiss, J. Alford-Teaster, T. Onega. 2020. Automated delineation of cancer service areas in northeast region of the United States: a network optimization approach. *Spatial and Spatio-temporal Epidemiology* 33: 100338. doi:10.1016/j.sste.2020.100338. PMC7229644.

Wang, F. 2020. Why public health needs GIS? A methodological review. *Annals of GIS* 26: 1-12. DOI: 10.1080/19475683.2019.1702099. PMC7297184.

Hu, W., J. Tan, M. Li, F. Wang, and J. Wang. 2020. Impact of traffic on the spatiotemporal variations of spatial accessibility of emergency medical services in inner-city Shanghai. *Environment and Planning B: Urban Analytics and City* Tf*ru*2*cft*I0*0*9*3*

Wang, F., C. Liu, and Y. Xu. 2019. Mitigating the zonal effect in modeling urban population density functions by Monte Carlo simulation. *Environment and Planning B: Urban Analytics and City Science* 46: 1061–1078. DOI: 10.1177/2399808317749832.

Li, M., M-P Kwan, **F. Wang**, and J. Wang. 2018. Using points-of-interest data to estimate commuting patterns in central Shanghai. *Journal of Transport Geography* 72: 201-210. DOI: 10.1016/j.jtrangeo.2018.09.004

Hu, Y. **F. Wang**, C Guin, and H. Zhu. 2018. A spatio-temporal kernel density estimation framework for predictive crime hotspot mapping and evaluation. *Applied Geography* 99: 89-97. doi:10.1016/j.apgeog.2018.08.001

Sathiaraj, D., T Punkasem, F. Wang, and D.P.K. Seedah. 2018. Data-driven analysis on the e ects of extreme weather elements on tra c volume in Atlanta, GA, USA. *Computers, Environment and Urban Systems* 72:212-220. DOI: 10.1016/j.compenvurbsys.2018.06.012

Hu, Y., **F. Wang**, and I. Xierali. 2018. Automated delineation of Hospital Service Areas and Hospital Referral Regions by modularity optimization. *Health Services Research* 53: 236-255. DOI: 10.1111/1475-6773.12616. PMID27861822 (PMC5785331)

Wang, F. 2018. Inverted Two-Step Floating Catchment Area method for measuring facility crowdedness. *Professional Geographer* 70: 251-260. DOI: 10.1080/00330124.2017.1365308

Wang, F., Y. Hu, S. Wang, and X. Li. 2017. Local Indicator of Colocation Quotient with a statistical significance test: examining spatial association of crime and facilities. *Professional Geographer* 69: 22-31. DOI: 10.1080/00330124.2016.1157498

Jia, P., **F. Wang**, and I. Xierali. 2017. Using a Huff-based model to delineate Hospital Service Areas. *Professional Geographer* 69: 522-530. DOI:10.1080/00330124.2016.1266950

Hu, Y., **F. Wang**, and C. G. Wilmot. 2017. Commuting variability by wage groups in Baton Rouge 1990-2010. *Papers in Applied Geography* 3: 14-29. DOI: 10.1080/23754931.2016.1248577

Luo, J., L. Tian, L. Luo, H. Yi and **F. Wang**. 2017. Two-Step Optimization for Spatial Accessibility Improvement: A case study of health care planning in rural China. *BioMed Research International* 2017: 2094654, doi:10.1155/2017/2094654. PMC5412212

Onega, T, J Alford-Teaster and F Wang. Population-based geographic access to National Cancer Institute (NCI) Cancer Center parent and satellite facilities. *Cancer* 123: 3305-3311. DOI: 10.1002/cncr.30727. PMID28464212.

Jia, P., **F. Wang**, and I. Xierali. 2017. Delineating hierarchical Hospital Service Areas in Florida. *Geographical Review* 107: 608-623. DOI: 10.1111/j.1931-0846.2016.12207.x

Xu, Y., C. Fu, T. Onega, X. Shi, **F. Wang**. 2017. Disparities in geographic accessibility of National Cancer Institute Cancer Centers in the United States. *Journal of Medical Systems* 41:203. DOI: 10.1007/s10916-017-0850-0. PMID29128881. PMC8208496.

Li, X., F. Wang, and H. Yi. 2017. A two-step approach to planning new facilities towards equal accessibility. *Environment and Planning B: Urban Analytics and City Science* 44: 994-1011. DOI: 10.1177/0265813516657083

Hu, Y. and **F. Wang**. 2016. Temporal trends of intraurban commuting in Baton Rouge 1990-2010. *Annals of the American Association of Geographers* 106: 470-479. DOI: 10.1080/00045608.2015.1113117

Mu, L., **F. Wang**, V. W. Chen and X. Wu. 2015. A place-oriented, mixed-level regionalization method for constructing geographic areas in health data dissemination and analysis. *Annals of the Association of American Geographers* 105: 48-66. PMC4523277.

Xu, Y., M. Wen and **F. Wang**. 2015. Multilevel built environment features and individual odds of overweight and obesity in Utah. *Applied Geography* 60: 197-203. Doi: 10.1016/j.apgeog.2014.10.006. PMC4523305.

Jia, P., I. Xierali and **F. Wang**. 2015. Evaluating and re-demarcating the Hospital Service Areas in Florida. *Applied Geography* 60: 248-253. Doi: 10.1016/j.apgeog.2014.10.008

Wang, F. and T. Onega. 2015. Accessibility of cancer care: disparities, outcomes and mitigation. *Annals of GIS* 21: 119-125. DOI: 10.1080/19475683.2015.1007893

Hu, Y. and **F. Wang**

Wang, F., G. Wang, J.F. Hartmann and W. Luo. 2012. Sinification of Zhuang place names in Guangxi, China: A GIS-based spatial analysis approach. *Transactions of the Institute of British Geographers* 37: 317-333. doi: 10.1111/j.1475-5661.2011.00471.x

Porta, S., V. Latora, **F. Wang** et al. 2012. Street centrality and location of economic

International Journal of Public Policy 5: 237-258. doi:10.1504/IJPP.2010.030606. PMC3540777

Luo, W., J. F. Hartmann and F. Wang. 2010. Terrain characteristics and Tai toponyms: A GIS analysis of Muang, Chiang and Viang. *GeoJournal* 75: 93–104. doi: 10.1007/s10708-009-9291-8.

Joseph, M. and **F. Wang**. 2010. Population density patterns in Port-au-Prince, Haiti: A model of Latin American city? *Cities* 27: 127-136. doi:10.1016/j.cities.2009.12.002

Driskell, L. and **F. Wang**. 2009. Mapping digital divide in neighborhoods: Wi-Fi access in Baton Rouge, Louisiana. *Annals of GIS* 15: 35-46. https://doi.org/10.1080/19475680903271042

Wang, J., F. Jin, H. Mo, and F. Wang. 2009. Spatiotemporal evolution of China's railway network in the 20th century: an accessibility approach. *Transportation Research Part A: Policy and Practice* 43: 765-778. https://doi.org/10.1016/j.tra.2009.07.003

Feng, J., **F. Wang** and Y.-X. Zhou. 2009. The spatial restructuring of population in metropolitan Beijing: ToR Tm0 G Y.

Wang, F. 2007. Job access in disadvantaged neighborhoods in Cleveland, 1980-2000: implications for spatial mismatch and association with crime patterns. *Cityscape: A Journal of Policy Development and Research* 9: 95-121. https://www.jstor.org/stable/20868633

Wang, F., J. Hartmann, W. Luo and P. Huang. 2006. GIS-based spatial analysis of Tai place names in southern China: an exploratory study of methodology. *Geographic Information Sciences* 12: 1-9. https://doi.org/10.1080/10824000609480611

Wang, F., F. Jin and C. Gu. 2005. GIS-based method for delineating urban hinterlands in Northeast China. *Geographic Information Sciences* 11: 113-121. https://doi.org/10.1080/10824000509480606

Gu, C., **F. Wang** and G. Liu. 2005. The structure of social space in Beijing in 1998: a socialist city in transition. *Urban Geography* 26: 167-192. https://doi.org/10.2747/0272-3638.26.2.167

Wang, F. 2005. Job access and homicide patterns in Chicago: an analysis at multiple geographic levels based on scale-space theory. *Journal of Quantitative Criminology* 21: 195-217. https://link.springer.com/article/10.1007/s10940-005-2492-5

Wang, F. and W. Luo. 2005. Assessing spatial and nonspatial factors for healthcare access: Towards an integrated approach to defining health professional shortage areas. *Health & Place* 11: 131-146. DOI: 10.1016/j.healthplace.2004.02.003. PMID15629681

Jin, F., **F. Wang** and Y. Liu. 2004. Geographic patterns of air passenger transport in China 1980-98: Imprints of economic growth, regional inequality and network development. *Professional Geographer* 56: 471-487. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.0033-0124.2004.00442.x

Wang, F. 2004. Spatial clusters of cancers in Illinois 1986-2000. *Journal of Medical Systems* 28: 237-256. https://link.springer.com/article/10.1023/B:JOMS.0000032842.78643.38. PMID15446615

Luo, W., F. Wang and C. Douglass. 2004. Temporal changes of access to primary health care in Illinois (1990-2000) and policy implications. *Journal of Medical Systems* 28: 287-299. DOI: 10.1023/b:joms.0000032845.90730.84. PMID15446618

Luo, W. and **F. Wang**. 2003. Measures of spatial accessibility to health care in a GIS environment: synthesis and a case study in Chicago region. *Environment and Planning B-Planning & Design* 30: 865-884. doi:10.1068/b29120. PMC8238135.

Wang, F. 2003. Job proximity and accessibility for workers of various wage groups. *Urban Geography* 24: 253-271. https://doi.org/10.2747/0272-3638.24.3.253

Wang, F. and W. W. Minor. 2002. Where the jobs are: employment access and crime

Wang, F. 1998. Modeling traffic emission rates with artificial neural networks. *Environment and Geographical Modelling* 2: 103-113.

Wang, F. 1998. Urban population distribution with various road networks: a simulation approach. *Environment and Planning B-Planning & Design* 25: 265-278. https://doi.org/10.1068/b250265

Wang, F. and J.-M. Guldmann. 1997. A spatial equilibrium model for region size, urbanization ratio, and rural structure. *Environment and Planning A* 29: 929-941. https://doi.org/10.1068/a290929

Wang, F. and J.-M. Guldmann. 1996. Simulating urban density with a gravity-based model. *Socio-Economic Planning Sciences* 30:

1/1/2023-12/31/2024: Senlin Chen (PI), Fahui Wang (co-I), Amanda Staiano, and Gang Hu. "Mapping Behavioral and Social Determinants of Health to Inform Louisiana Medicaid Delivery", Louisiana Department of Health, Grant No. AM-22-0978, $708,887.

2/1/2022-1/31/2027: Tracy Onega and Fahui Wang (MPIs), Anna N A Tosteson, Erika Moen, and Jennifer A Alford-Teaster (co-Investigators). "Access, Utilization and Outcomes of Cancer Services in the Era of Telemedicine", National Cancer Institute (NCI), National Institutes of Health (NIH), Grant No. R01CA267990-01, $1,830,578.

8/14/2017-7/31/2020: Tracy Onega and Fahui Wang (MPIs). "Automated Delineation of Cancer Service Areas", National Cancer Institute (NCI), National Institutes of Health (NIH), Grant No. R21CA212687, $392,344.

10/1/2012-9/30/2015: Cecile C Guin (PI), Juan J Barthelemy, Matthew R Lee, Tracey Rizzuto, Edward Shihadeh, Fahui Wang. "Evaluation of Project BRAVE (Baton Rouge Area Violence Elimination)", Office of Juvenile Justice and Delinquency Prevention (OJJDP), U.S. Department of Justice, Grant No. 2012-PB-FX-K001, $1,499,993.

9/1/2011-8/31/2014: Christopher D. White (PI), Jeffrey S. Hanor, Chacko J. John, Mark J. Kaiser, Mileva Radonjic, Mayank Tyagi, Fahui Wang. "Innovative Geothermal Heat Extraction by Wellbore Energy Conversion, Zero Mass Withdrawal, and Engineered Pycnal Flow", U.S. Department of Energy, Grant No. DE-EE0005125, $997,332.

01/01/2010-12/31/2014: Ming Wen (PI). "Neighborhood Built and Social Environment and Physical Activity and Weight Status," National Institute of General Medical Sciences (NIGMS), National Institutes of Health (NIH), Grant No. R01CA140319-01A1, $1.2 million (my role: senior consultant).

9/1/2009-8/31/2011: Fahui Wang and Yu Liu (co-PIs), "Evolutions of Transport Networks and Systems of Cities in China 1906-2008," Oversea Collaborative Project, National Natural Science Foundation of China, Grant No. 40928001, 200,000 RMB (equivalent to US$35,000).

8/1/2009-7/31/2010: Fahui Wang (PI), Vivien Chen and Xiaocheng Wu, "Constructing Geographic Areas in GIS for Cancer Data Analysis," SEER-

for Healthcare Research and Quality (AHRQ), U.S. Department of Health and Human Services (DHHS), Grant No. R03-HS11764, $100,000.

01/2000-12/2001: Fahui Wang (PI) and W. William Minor, "Is Job Accessibility Relevant to Crime Patterns: A GIS Approach," National Institute of Justice (NIJ), U.S. Department of Justice (DOJ), Grant No. 2000-IJ-CX-0023, $34,996.

Other Research and Educational Grants

08/2018-08/2022: Fahui Wang, "Location and Colocation Behavior of Business in Louisiana," Economic Development Assistantship, LSU Graduate School, $100,000

08/2012-08/2016: Fahui Wang, "Geographic and Racial Disparities in Job Accessibility in Baton Rouge 1980-2010: Implications and Policy Remedies," Economic Development Assistantship, LSU Graduate School, $100,000

V.   COURSES TAUGHT

Northern Illinois University

     GEOG 204: Geography of Economic Activities
     GEOG 304: Transportation Geography
     GEOG 338: Geography of Asia
     GEOG 359: Introduction to GIS
     GEOG 362: Urban Systems
     GEOG 459: GIS
     GEOG 463: Urban Geography
     GEOG 464: Location Theory
     GEOG 504: Concepts of Human Geography

Louisiana State University

     GEOG 1003: Human Geography (Africa & Asia)
     GEOG 4037: Geography of China
     GEOG 4047: GIS
     GEOG 4073: Urban Geography
     GEOG 4077: Economic Geography
     GEOG 7935: Quantitative Methods for Geographical Analysis
     GEOG 7945: Socioeconomic Applications of GIS
     GRAD 7004: Learning Through Evidence-Based Teaching

VI.   THESES AND DISSERTATIONS DIRECTED

Northern Illinois University

Xuan Kuai. 2019. Deciphering Public Transit Ridership in Baton Rouge: Spatial Disaggregation Approaches

Haojie Zhu. 2020. Building an Agent-Based Crime Simulation with Environmental Criminology and Time Geography: A Case Study of Robberies in Baton Rouge, Louisiana

Ya Han. 2021. Predictive Crime Hotspot Analysis with the Spatiotemporal Kernel Density

Annals of GIS (2008-)

Chinese Geographical Science

May 17, 2018, "Place Matters When Developing Public Health Policy", Invited Panelist, Texas State Health & GIS Conference, Round Rock, Texas.

May 12, 2017, "Three GIS-Automated Tools for Public Health Studies and Beyond", the COHPA Research Methods Speaker Series, University of Central Florida, Orlando, Florida.

Jan 23, 2017, "GIS-Powered Social Sciences and Public Policy", the Kinder Institute for Urban Research Speaker Series, Rice University, Houston, Texas.

December 23, 2016, "Tell Better Stories in GIS", the Zhizhuo Undergraduate Forum Speaker Series, College of Remote Sensing, Wuhan University, China.

November 8, 2014, "Transportation, Human Mobility and Public Policy", the Beijing Forum, Beijing, China.

June 19, 2013, "Quantifying Qualitative Spatial Issues in GIS", Keynote Speech, the 4th Forum on Spatially Integrated Humanities and Social Sciences, Henan University, Kaifeng, China.

May 26, 2013, "Transport Networks and Human Settlement: A Sino-US Comparative Perspective", the Shanghai Forum, Shanghai, China.

July 11, 2012, "Quantifying Qualitative Issues in Geography", the Shi-Jian Distinguished Speaker Series, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China.

April 12, 2011, "Inequality in Healthcare Access and Late-stage Cancer Diagnosis", the Control and Population Sciences Research Program Speaker Series, Huntsman Cancer Institute Cancer, University of Utah, Salt Lake City, Utah.

September 21, 2010, "Urbanization, Urban Development and Digital City", the Pingshan Distinguished Speaker Series, Shenzhen, China.

VIII. APPENDIX

1. REFEREED JOURNAL PAPERS IN CHINESE (total = 15)

[Corresponding author in bold (   )]

, 1989, "   "   9   1   44-49

, 1989, "   "   8   1   14-20

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