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Current Position: **Professor**, Department of Urban and Regional Planning, College of Design, Construction and Planning, University of Florida
Director, International Center for Adaptation Planning and Design (iAdapt), College of Design, Construction and Planning, University of Florida
Director, Ph.D. program, College of Design, Construction and Planning, University of Florida

EDUCATION

Ph.D. Urban Studies, Portland State University, Portland, Oregon. March 1990-August 1994
Areas of concentration: transportation planning and geographic information systems
M.S. Economics, Portland State University, Portland, Oregon. August 1992-June 1994
M.S. Geography, Graduate School of University of Science and Technology of China, Beijing, People's Republic of China (PRC). August 1983-July 1986
B.S. Geography, Central China Normal University, Wuhan, PRC. October 1979-July 1983

RESEARCH INTERESTS

- Transportation and land use planning and policy
- Adaptation planning for Climate change
- Urban Analytics
- Urban environment and sustainability
- International planning

WORK EXPERIENCE

Professor, University of Florida (8/07 – current)
Professor and Chair, University of Florida (8/07 – 12/10)
Visiting Professor, Shanghai Jiao Tong University (6/11 – current)
Visiting Professor, School of Transportation Engineering, Tongji University, Shanghai, China (5/07 – 5/11)
Professor, University of Wisconsin-Milwaukee (8/05 – 8/07)
Director, Center for Advanced Spatial Information Research, UWM (4/2003 – 8/07)
Visiting Associate Professor, Massachusetts Institute of Technology (8/03 – 1/04)
Associate Professor, University of Wisconsin-Milwaukee (8/01 – 7/05)
Assistant Professor, University of Wisconsin-Milwaukee (8/96 – 7/01)

Research Scientist II, Georgia Institute of Technology (9/95 – 8/96)

Research Associate & Adjunct Assistant Professor, Portland State University, OR (9/94 -- 8/95)

Research Assistant, Portland State University, Portland, Oregon (6/93 -- 8/94)

Associate Transportation Planner, City of Beaverton, Oregon (7/92 -- 6/93)

Graduate Research Assistant, Portland State University, Portland, Oregon (3/90 -- 6/92)

Assistant Research Professor, Chinese Academy of Sciences, Beijing, PRC (8/86 -- 2/90)

AWARDS

- **University of Florida Term Professor**, by the University of Florida, September 2019
- **University of Florida Term Professor**, by the University of Florida, September 2017
- **International Educator of the Year Award**, by the University of Florida, October 2016
- **UFRF Professorship**, by University of Florida, October 2015
- **Excellence in Research Award** by UWM Foundation/Graduate School of the University of Wisconsin-Milwaukee, October 2002
- **Graduate School Research Committee Award** by the Graduate School of UWM, October 1997
- **Best Paper Award** for the paper titled “A GIS-Based Automatic Trip Planning for Advanced Public Transportation Systems” at the International Symposium on GIS/Remote Sensing Research, Development and Applications in West Palm Beach, Florida, April 1996
- **Science and Technology Improvement Award for Best Research** on the Study of Strategic Planning in the City of Daqing, Chinese Academy of Sciences (the highest national award for research in the PRC, March 1991).

COURSES TAUGHT

- 1 **Doctor Core II: Doctoral Research Methods** (Ph.D. level, at University of Florida)
- 2 **Planning for Climate Change** (graduate level, at University of Florida)
- 3 **Transportation and Land Use Modeling** (graduate level, at University of Florida)
- 4 **Internet GIS** (graduate level, at University of Florida and University of Wisconsin-Milwaukee)
- 5 **Summer Study Abroad Program: China Planning and Design** (graduate level, at University of Florida)
- 6 **Transportation Planning and Policy** (graduate level, at University of Wisconsin-Milwaukee)
- 7 **Transportation and Land Use** (graduate level, at Portland State University)
- 8 **GIS Applications in Urban Planning** (graduate level, at University of Wisconsin-Milwaukee)
- 9 **Advanced Techniques in GIS** (graduate level, at UWM and Georgia Institute of Technology)
- 10 **Data Analysis I** (graduate level, at University of Wisconsin-Milwaukee)
- 11 **Data Analysis II** (graduate level, at University of Wisconsin-Milwaukee)

PUBLICATIONS

Books

1. **Peng, Zhong-Ren** and Tsou, Ming-Hsiang (2003). *Internet GIS: Distributed Geographic Information Services for the Internet and Wireless Networks*. Hoboken, NJ: John Wiley & Sons.
2. **Peng, Zhong-Ren** (editor in chief) (forthcoming). *Major Reference Series: Urban and Regional Planning*. Springer.

Refereed Journal Articles

1. Chen, Qian, Dongsheng Wang, Xiaobing Li, Bai Li, Ruifeng Song, Hongdi He,* Zhongren Peng (2019), Vertical Characteristics of Winter Ozone Distribution within the Boundary Layer in Shanghai Based on Hexacopter Unmanned Aerial Vehicle Platform, *Sustainability* 2019, 11(24), 7026; <https://doi.org/10.3390/su11247026>
2. Li, Xiao-Bing, **Zhong-Ren Peng***, Qing-Chang Lu, Dongfang Wang, Xiao-Ming Hu, Dongsheng Wang, BaiLi, Qingyan Fu, Guangli, Xiu, Hongdi He (2019), Evaluation of unmanned aerial system in measuring lower tropospheric ozone and fine aerosol particles using portable monitors, *Atmospheric Environment*, <https://doi.org/10.1016/j.atmosenv.2019.117134>
3. 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*, Vol. 80, October 2019, 102502, <https://doi.org/10.1016/j.jtrangeo.2019.102502>
4. Han, Yu and **Zhong-Ren Peng***, (2019), "The integration of local government, residents, and insurance in coastal adaptation: an agent-based modeling approach," *Computers, Environment and Urban Systems*, Volume 76, Pages 69-79 (<https://doi.org/10.1016/j.compenvurbsys.2019.04.001>)
5. Fu, Xinyu, Bowen Sun, Kathryn Frank, Zhong-Ren Peng (2019), "Evaluating sea-level rise vulnerability assessments in the USA," *Climatic Change* (2019) 155: 393–415. <https://doi.org/10.1007/s10584-019-02488-5>
6. Yu, Haitao & **Peng, Z.-R***. (2019): The impacts of built environment on ridesourcing demand: A neighborhood level analysis in Austin, Texas, *Urban Studies*, <https://doi.org/10.1177/0042098019828180>
7. 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 the Puget Sound Region. *Journal of Transport Geography*, Volume 78, June 2019, Pages 41-55, <https://doi.org/10.1016/j.jtrangeo.2019.05.003>
8. Li, B., Li, X. B., Li, C., Zhu, Y., **Peng, Z. R***, Wang, Z., & Lu, S. J. (2019). Impacts of wind fields on the distribution patterns of traffic emitted particles in urban residential areas. *Transportation Research Part D: Transport and Environment*, 68, 122-136. <https://doi.org/10.1016/j.trd.2018.01.030>
9. Yu, Haitao and **Zhong-Ren Peng*** (2019): "Exploring the spatial variation of ridesourcing demand and its relationship to built environment and socioeconomic factors with the geographically weighted Poisson regression," *Journal of Transport Geography*, (<https://doi.org/10.1016/j.jtrangeo.2019.01.004>)

10. Li, Bai, Rong Cao, Zhanyong Wang, Rui-Feng Song, **Zhong-Ren Peng***, Guangli Xiu, Qingyan Fu (2019), “Use of multi-rotor unmanned aerial vehicles for fine-grained roadside air quality monitoring,” *Transportation Research Record: Journal of the Transportation Research Board*, DOI: 10.1177/0361198119847991
11. Fu, Xinyu and **Zhong-Ren Peng*** (2019), Assessing the sea-level rise vulnerability in coastal communities: A case study in the Tampa Bay Region, US, *Cities*, Volume 88, Pages 144-154: <https://doi.org/10.1016/j.cities.2018.10.007>
12. Zhai, Wei, Xueyin Bai, Yu Shi, Yu Han, **Zhong-Ren Peng**, Chaolin Gu (2019), Beyond Word2vec: An approach for urban functional region extraction and identification by combining Place2vec and POIs, *Computers, Environment and Urban Systems*, Volume 74, Pages 1-12, <https://doi.org/10.1016/j.compenvurbsys.2018.11.008>
13. Chao Li, Zhanyong Wang*, Bai Li, **Zhong-Ren Peng***, Qingyan Fu (2018), Investigating the relationship between air pollution variation and urban form. *Building and Environment*, <https://doi.org/10.1016/j.buildenv.2018.06.038>
14. Tang, Junyu, Yi Zhu, Yizhe Huang, **Zhong-Ren Peng***, Zhanyong Wang, (2018), Identification and interpretation of spatial-temporal mismatch between taxi demand and supply using GPS data, *Journal of Intelligent Transportation Systems: Technology, Planning and Operations*, DOI: 10.1080/15472450.2018.1518137
15. Wang, Zhanyong, Shuqi Zhong, Hong-di He, **Zhong-Ren Peng**, Ming Cai, 2018, “Fine-scale variations in PM2.5 and black carbon concentrations and corresponding influential factors at an urban road intersection,” *Building and Environment*, Volume 141, Pages 215-225, <https://doi.org/10.1016/j.buildenv.2018.04.042>
16. Liu, Chao, Sen Huang, Peng Xu, **Zhong-ren Peng** (2018) Exploring an integrated urban carbon dioxide (CO2) emission model and mitigation plan for new cities, *Environment and Planning B: Urban Analytics and City Science*, 45(5), 821–841. <https://doi.org/10.1177/0265813516686972>
17. Bai Li, Yi Zhu, Zhanyong Wang*, Chao Li, **Zhong-Ren Peng***, and Lixin Ge, 2018, “Use of Multi-Rotor Unmanned Aerial Vehicles for Radioactive Source Search,” *Remote Sensing*, 2018, 10(5), 728; <https://doi.org/10.3390/rs10050728>
18. Liu, Xiaofeng, **Zhong-Ren Peng***, Li-Ye Zhang, (2018), Real-time UAV Rerouting for Traffic Monitoring with Decomposition Based Multi-objective Optimization, *Journal of Intelligent & Robotic Systems*, PP 1-11, <https://doi.org/10.1007/s10846-018-0806-8>
19. Li, Xiao-Bing, Dongfang Wang, Qing-Chang Lu, **Zhong-Ren Peng***, Qingyan Fu, Xiao-Ming Hu, Juntao Huo, Guangli Xiu, Bai Li, Chao Li, Dong-Sheng Wang, Hanyu Wang, (2018), Three-dimensional analysis of ozone and PM2.5 distributions obtained by observations of tethered balloon and unmanned aerial vehicle in Shanghai, China, *Stochastic Environmental Research and Risk Assessment*, 32(5), pp. 1189-1203, DOI: 10.1007/s00477-018-1524-2
20. Yu, Haitao, Junfeng Jiao, Eric Houston, **Zhong-Ren Peng**, (2018), Evaluating the relationship between rail transit and industrial agglomeration: An observation from the Dallas-fort worth region, TX, *Journal of Transport Geography* 67: 33-52, <https://doi.org/10.1016/j.jtrangeo.2018.01.008>
21. Jiang, Ruoyun, Qing-Chang Lu, **Zhong-Ren Peng***, (2018) “A station-based rail transit network vulnerability measure considering land use dependency,” *Journal of Transport Geography*, Volume 66, Pages 10-18, <https://doi.org/10.1016/j.jtrangeo.2017.09.009>
22. Wang, Zhanyong, Dongsheng Wang, **Zhong-Ren Peng**, Ming Cai, Qingyan Fu and Dongfang Wang, (2018) “Performance assessment of a portable nephelometer for outdoor

- particle mass measurement,” *Environmental Science: Processes & Impacts*, 20, 370-383.
DOI: 10.1039/C7EM00336F
23. Li, X. B., Wang, D. S., Lu, Q. C., **Peng, Z.-R***, & Wang, Z. Y. (2017). Investigating vertical distribution patterns of lower tropospheric PM 2.5 using unmanned aerial vehicle measurements. *Atmospheric Environment*. <https://doi.org/10.1016/j.atmosenv.2017.11.009>
 24. Zhao L., Song J., **Peng Z.-R***(2017). Modeling land-use change and population relocation dynamics in response to different sea level rise scenarios: Case study in Bay County, Florida. *Journal of Urban Planning and Development*, Vol. 143, Issue 3, p. 04017012. [https://doi.org/10.1061/\(ASCE\)UP.1943-5444.0000398](https://doi.org/10.1061/(ASCE)UP.1943-5444.0000398)
 25. Wang, Zhanyong; Lu, Qing-Chang; He, Hong-Di; Wang, Dongsheng; Gao, Ya; **Peng, Zhong-Ren*** (2017). Investigation of the spatiotemporal variation and influencing factors on fine particulate matter and carbon monoxide concentrations near a road intersection. *Frontiers of Earth Science*, 11(1),63-75
 26. Li, Li; Lu, Qing-Chang; Chang, Yun-Tao; **Peng, Zhong-Ren** (2017). A Compositional Analysis Of Unbalanced Usages Of Multiple Left-Turn Lanes, *Promet-Traffic & Transportation*. 29(3),287-298
 27. Lu W., Lu Q., **Peng Z***, Sun J. (2017) Impacts of Bus Lane on Bus Travel Time Reliability: a Case Study in Shenzhen. *Journal of Donghua University (English Edition)* 34(2),189-194
 28. Baoguo Jiang, Song Liang, **Zhong-Ren Peng**, Haozhe Cong, Morgan Levy, Qu Cheng, Tianbing Wang, Justin V Remais* (2017), Transport and public health in China: the road to a healthy future, *The Lancet*, Volume 390, No. 10104, p1781–1791, DOI: [http://dx.doi.org/10.1016/S0140-6736\(17\)31958-X](http://dx.doi.org/10.1016/S0140-6736(17)31958-X)
 29. C Peng, M Yuan, C Gu, **Z-R Peng**, T Ming (2017), A review of the theory and practice of regional resilience. *Sustainable Cities and Society* 2017, 29: 86-96. <http://dx.doi.org/10.1016/j.scs.2016.12.003>
 30. Sun, Bowen, Haitao Yu, **Zhong-Ren Peng**, Ya Gao (2017). High-Speed Rail and Manufacturing Agglomeration: Evidence from Beijing-Guangzhou High-Speed Rail in China. *Transportation Research Record Journal of the Transportation Research Board* 2606: 86-95, January 2017, <https://doi.org/10.3141/2606-12>
 31. Jie Song; Xinyu Fu; Ruoniu Wang; **Zhong-Ren Peng***; Zongni Gu: (2017) “Does planned retreat matter? Investigating land use change under the impacts of flooding induced by sea level rise,” in *Mitigation and Adaptation Strategies for Global Change* (<https://link.springer.com/article/10.1007%2Fs11027-017-9756-x>)
 32. Peng Chong, Guo Zuyuan, **Peng Zhongren**, 2017, Research Progress on the Theory and Practice of Foreign Community Resilience, *Urban Planning International*, Vol. 4, pp 60-66, DOI: 10.22217/upi.2016.127
 33. Xiao-Bing Li, Dong-Sheng Wang, Qing-Chang Lu , **Zhong-Ren Peng***, Si-Jia Lu, Bai Li, Chao Li (2017), Three-dimensional investigation of ozone pollution in the lower troposphere using an unmanned aerial vehicle platform, *Environmental Pollution*, DOI: 10.1016/j.envpol.2017.01.064
 34. Jie Song, Xinyu Fu, Yue Gu, Yujun Deng, **Zhong-Ren Peng***. (2017). An Examination of Land Use Impacts of Sea Level Rise Induced Flooding. *Natural Hazards and Earth System Sciences*, 17(3), 315-334. doi:10.5194/nhess-17-315-2017
 35. Hong-Wei Wang, **Zhong-Ren Peng***, Qing-Chang Lu, Daniel (Jian) Sun & Cong Bai (2017), Assessing effects of bus service quality on passengers’ taxi-hiring behavior, *Transport*, DOI: 10.3846/16484142.2016.1275786, Pages 1-15

36. Shen, Suwan; Feng, Xi; **Peng, Zhong-Ren** (2016), A framework to analyze vulnerability of critical infrastructure to climate change: the case of a coastal community in Florida. *NATURAL HAZARDS* .84(1),589-609
37. Wang H.-W., Cheng K., Lu Q.-C., **Peng Z.-R***(2016). Improved model of start-wave velocity at intersections based on unmanned aerial vehicle data. *Journal of Donghua University (English Edition)* 33(1) 13-19
38. Deng, Yujun, Caitlin Young, Xinyu Fu, Jie Song, **Zhong-Ren Peng***, (2016), The integrated impacts of human activities and rising sea level on the saltwater intrusion in the east coast of the Yucatan Peninsula, Mexico, *Natural Hazards*, doi:10.1007/s11069-016-2621-5
39. Fu, Xinyu, Jie Song, Bowen Sun, and **Zhong-Ren Peng***, (2016), "Living on the Edge": Estimating the Economic Cost of Sea Level Rise on Coastal Real Estate in the Tampa Bay Region, Florida, *Ocean & Coastal Management*, DOI: 10.1016/j.ocecoaman.2016.09.009.
40. Song, J., **Peng***, **Z. R.**, Zhao, L., & Hsu, C. H. (2016), "Developing a theoretical framework for integrated vulnerability of businesses to sea level rise." *Natural Hazards*, 1-21.
41. Fu, Xinyu, Mohammed Gomaa, Yujun Deng & **Zhong-Ren Peng*** (2016), Adaptation planning for sea level rise: a study of US coastal cities, *Journal of Environmental Planning and Management*, DOI:10.1080/09640568.2016.1151771
42. Liu, Chao, Barron H. Henderson, Dongfang Wang, Xinyuan Yang, **Zhong-Ren Peng*** (2016), A land use regression application into assessing spatial variation of intra-urban fine particulate matter (PM2.5) and nitrogen dioxide (NO2) concentrations in City of Shanghai, China, *Science of The Total Environment*, Vol. 565, PP. 607–615, doi:10.1016/j.scitotenv.2016.03.189
43. Li, Xiao-Bing, Qing-Chang Lu, Si-Jia Lu, Hong-Di He, **Zhong-Ren Peng***, Ya Gao, Zhan-Yong Wang (2016), The impacts of roadside vegetation barriers on the dispersion of gaseous traffic pollution in urban street canyons, *Urban Forestry & Urban Greening*, Volume 17, Pages 80–91, doi:10.1016/j.ufug.2016.03.006
44. Gao, Ya, Zhanyong Wang, Qing-Chang Lu, Chao Liu, **Zhong-Ren Peng***, Yue Yu (2016), "Prediction of vertical PM 2.5, concentrations alongside an elevated expressway by using the neural network hybrid model and generalized additive model." *Frontiers of Earth Science*, 2016:1-14
45. Wang B., Su S., **Peng Z.**, Yang F. (2015) Coastal wetlands impact assessment of sea level rise. *Tongji Daxue Xuebao/Journal of Tongji University*. 43 (4) 569-575
46. Wang Q., Liu Z., **Peng Z*** (2015), A PSO-SVM model for short-term travel time prediction based on bluetooth technology, *Journal of Harbin Institute of Technology (New Series)* 22 (3) 7-14
47. Sun D.J., Xu Y., **Peng Z.-R.** (2015) Timetable optimization for single bus line based on hybrid vehicle size model. *Journal of Traffic and Transportation Engineering (English Edition)*.2(3)179-186
48. **Peng, Zhong-Ren***, Dongsheng Wang, Zhanyong Wang, Ya Gao, Sijia Lu, (2015), A study of vertical distribution patterns of PM2.5 concentrations based on ambient monitoring with unmanned aerial vehicles: A case in Hangzhou, China, *Atmospheric Environment*, doi:10.1016/j.atmosenv.2015.10.074
49. Wang, Zhan-Yong; He, Hong-Di; Lu, Feng; Lu, Qing-Chang; & **Peng, Zhong-Ren*** (2015). Hybrid Model for Prediction of Carbon Monoxide and Fine Particulate Matter

- Concentrations near a Road Intersection. *Transportation Research Record: Journal of the Transportation Research Board*, 2503: 29-38. doi:10.3141/2503-04
50. Peng, Chong; Ming, Ting-Zhen*; Cheng, Jian-Quan; Wu Yong-Jia; & **Peng, Zhong-Ren*** (2015). Modeling Thermal Comfort and Optimizing Local Renewal Strategies—A Case Study of Dazhimen Neighborhood in Wuhan City. *Sustainability*, 7(3), 3109-3128. doi:10.3390/su7033109
51. Wang, Zhan-Yong; Lu, Feng; He, Hong-Di; Lu, Qing-Chang; Wang, Dong-Sheng; & **Peng, Zhong-Ren*** (2015). Fine-scale estimation of carbon monoxide and fine particulate matter concentrations in proximity to a road intersection by using wavelet neural network with genetic algorithm. *Atmospheric Environment*, 104, 264-272. doi:10.1016/j.atmosenv.2014.12.058
52. Ni, Xun-You; Sun, Daniel Jian*; & **Peng, Zhong-Ren** (2015). An improved incremental assignment model for parking variable message sign location problem. *Journal of advanced transportation*, 49(4). doi:10.1002/atr.1305
53. Lu, Qing-Chang*; **Peng, Zhong-Ren**; & Zhang, Jun-Yi (2015). Identification and Prioritization of Critical Transportation Infrastructure: Case Study of Coastal Flooding. *Journal of Transportation Engineering*, 141(3). doi:10.1061/(ASCE)TE.1943-5436.0000743
54. Peng, Chong; Ming, Ting-Zhen; Gui, Jin-Le; Tao, Yong; & **Peng, Zhong-Ren** (2015). Numerical analysis on the thermal environment of an old city district during urban renewal. *Energy and Buildings*, 89, 18-31. doi:10.1016/j.enbuild.2014.12.023
55. Chen, Xian-Zhe; Lu, Qing-Chang*; **Peng, Zhong-Ren*** and Ash, E. John (2015). Analysis of Transportation Network Vulnerability under Flood Disaster, *Transportation Research Record: Journal of the Transportation Research Board*, No. 2532, pp. 37-44
56. Bai, Cong, Zhong-Ren Peng, Qing-Chang Lu, and Jian Sun, (2015) Dynamic Bus Travel Time Prediction Models on Road with Multiple Bus Routes, *Computational Intelligence and Neuroscience* Volume 2015, Article ID 432389, <http://dx.doi.org/10.1155/2015/432389>
57. Zhao, Li-Yuan; **Peng, Zhong-Ren***; Shen, Su-Wan; & Yang, Fei (2014). A bid-rent land-use adaptation model for mitigating road network vulnerability and traffic emissions. *International Journal of Environmental Science and Technology*, 11(8), 2359-2368. doi: 10.1007/s13762-014-0642-8
58. Zhang, Dao-Zheng & **Peng, Zhong-Ren*** (2014). Near-road fine particulate matter concentration estimation using artificial neural network approach. *International Journal of Environmental Science and Technology*, 11(8), 2403-2412. doi: 10.1007/s13762-014-0565-4
59. Lu, Qing-Chang*; Zhang, Jun-Yi; **Peng, Zhong-Ren**; & Rahman, Abm Sertajur (2014). Inter-city Travel Behavior Adaptation to Extreme Weather Events. *Journal of Transport Geography*, 41, 148-153. doi: 10.1016/j.jtrangeo.2014.08.016
60. Lu, Qing-Chang*; **Peng, Zhong-Ren**; Wang, Zhan-Yong; & Zhang, Li-Ye (2014). Economic analyses of sea-level rise adaptation strategies in transportation considering spatial autocorrelation. *Transportation Research Part D: Transport and Environment*, 33, 87-94. doi:10.1016/j.trd.2014.09.004
61. Yu, Lin-Jun; Liu, Ya-Lan*; **Peng, Zhong-Ren**; Liu, Meng-Meng; & Ren, Yu-Huan (2014). A Modeling Framework for estimating Road Segment Based on-Board Vehicle Emissions. *IOP Conference Series Earth and Environmental Science*, 17(1). DOI:10.1088/1755-1315/17/1/012253

62. Zhao, Li-Yuan; & **Peng, Zhong-Ren*** (2014). LandSys II: An Agent-based Land Use Forecast Model with Artificial Neural Networks and Multi Agents model. *Journal of Urban Planning and Development*. doi:10.1061/(ASCE)UP.1943-5444.0000255
63. Xu, Tian-Dong; Hao, Yuan; **Peng, Zhong-Ren;** Sun, Li-Jun (2014). Corrigendum: Modeling probabilistic traffic breakdown on congested freeway flow. *Canadian Journal of Civil Engineering*, 14(2), 181-181(1). doi:10.1139/cjce2014-0009
64. Xu, Tian-Dong*; Hao, Yuan; **Peng, Zhong-Ren;** & Sun, Li-Jun (2014). Anticipatory traveler information system for freeway arterial networks. *IET Intelligent Transport Systems*, 8(3), 286-297. doi:10.1049/iet-its.2012.0067
65. Zhang, Dao-Zheng; **Peng, Zhong-Ren;** & Sun, Jian* (2014). A Comprehensive Taxi Assessment Index Using Floating Car Data. *Journal of Harbin Institute of Technology*, 21(1), 7-16.
66. Sun, Daniel, C Zhang, L Zhang, F Chen, **ZR Peng** (2014), Urban travel behavior analyses and route prediction based on floating car data, *Transportation Letters*, Pages 118-125. <https://doi.org/10.1179/1942787514Y.0000000017>
67. Xu, Tian-Dong*; Hao, Yuan; **Peng, Zhong-Ren;** & Sun, Li-Jun (2013). Modeling probabilistic traffic breakdown on congested freeway flow. *Canadian Journal of Civil Engineering*, 40(10), 999-1008. doi:10.1139/cjce-2012-0067
68. Yu, Lin-Jun*; Sun, Dan-Feng; **Peng, Zhong-Ren;** & Zhang, Jian (2013). A Hybrid System of Expanding 2D GIS into 3D Space. *Cartography and Geographic Information Science*, 39(3), 140-153. doi:10.1559/15230406393140
69. Chang, Jing-Jing; **Peng, Zhong-Ren;** & Sun, Jian* (2013). Freight vehicle routing optimization for sporadic orders using floating car data. *Journal of Donghua University (English Edition)*, 30(2), 96-102.
70. Zhang Dao-Zheng; Sun, Jian*; & **Peng, Zhong-Ren** (2013). Urban Taxi Goodness Index and System Implementation of GIS. *Journal of Transportation Systems Engineering and Information Technology*, 13(1), 87-96. (In Chinese)
71. Yu, Lin-Jun; Sun, Dan-Feng; **Peng, Zhong-Ren;** & Li, Hong (2013). A cellular automata land use model based on localized transition rules. *Geographical Research*, 32(4), 671-682.(In Chinese)
72. Xu, Tian-Dong*; Hao, Yuan; **Peng, Zhong-Ren;** & Sun, Li-Jun (2012). Automatic Calibration of Behavioral Parameters for Variable Message Sign-Based Route Guidance Consistent with Driver Behavior. *Transportation Research Record: Journal of the Transportation Research Board*, 2321, 55-65. doi: 10.3141/2321-08
73. **Peng, Zhong-Ren;** Sun, Jian; & Lu, Qing-Chang (2012). China's Public Transportation: Problems, Policies and Future Prospective to Sustainability. *Journal of the Institute of Transportation Engineers*, 82(5), 36-40.
74. Zhao, Li-Yuan*; & **Peng, Zhong-Ren** (2012). LandSys: Agent-Based Cellular Automata Model of Land Use Change Developed for Transportation Analysis, *Journal of Transport Geography*, 25 (2012), 35-49. doi:10.1016/j.trangeo.2012.07.006
75. Lu, Qing-Chang; **Peng, Zhong-Ren***; & Du, Rong-Yi (2012). Economic Analysis of Sea-Level Rise Impacts and Adaptation Strategies in Transportation, *Transportation Research Record: Journal of Transportation Research Board*, 2273, 54-61. doi:10.3141/2273-07
76. Xu, Tian-Dong*; Hao, Yuan; **Peng, Zhong-Ren;** & Sun, Li-Jun (2012). Real-time travel time predictor for route guidance consistent with driver behavior. *Canadian Journal of Civil Engineering*, 39(10): 1113-1124. doi:10.1139/12012-092

77. Xu, Xian-Rui*; Li, Xiao-Jie; Hu, Yu-Jie; & **Peng, Zhong-Ren** (2012). A novel algorithm to identifying vehicle travel path in elevated road area based on GPS trajectory data. *Frontiers of Earth Science*, 6(4), 354-363. doi:10.1007/s11707-012-0340-0
78. Liu, Xiao-Feng; **Peng, Zhong-Ren**; Sun, Daniel; & Zhang, Li-Ye (2012). A Novel Rule-Based Traffic State Forecasting Approach for Large Scale Road Networks. *Transportation Research Record: Journal of Transportation Research Board*, 2279, 3-11.
79. Sun, Jian*; Zhang, Li-Hui; Peng, Chun-Lu; **Peng, Zhong-Ren**; & Xu, Meng (2012). CA-based urban land use prediction model: A case study on Orange County, FL. *Journal of Transportation Systems Engineering and Information Technology*, 12(6), 85–92.
80. Liu, Xiao-Feng*; **Peng, Zhong-Ren**; Chang, Yun-Tao; & Zhang, Li-Ye (2012). Multi-objective evolutionary approach for UAV cruise route planning to collect traffic information. *J. Cent. South University*, 19(12), 3614–3621. doi: 10.1007/s11771-012-1449-8
81. Xu, Tian-Dong*; Sun, Li-Jun; **Peng, Zhong-Ren**; & Hao, Yuan (2011). Integrated route guidance and ramp metering consistent with drivers' en-route diversion behavior. *IET intelligent Transport Systems*, 5(4), 267-276. doi:10.1049/iet-its.2011.0073
82. Lu, Qing-Chang*; & **Peng, Zhong-Ren** (2011). Vulnerability Analysis of Transportation Network under the Scenarios of Sea Level Rise. *Transportation Research Record: Journal of Transportation Research Board*, 2263, 174-181. doi:10.3141/2263-19
83. Sun, Jian *; **Peng, Zhong-Ren**; Shan, Xiao-Fang; Chen, Wei-Ya; & Zeng, Xiao-Qing (2011). Development of Web-based transit trip planner using service oriented computing environment. *Transportation Research Record: Journal of Transportation Research Board*, 2217, 87-94. doi:10.3141/2217-11
84. Sun, Jian*; Liu, Qiong; & **Peng, Zhong-Ren** (2011). Research and analysis on causality and spatial-temporal evolution of urban traffic congestions - A case study on Shenzhen of China. *Journal of Transportation Systems Engineering and Information Technology*, 11(5), 86-93. doi:10.1016/S1570-6672(10)60143-2
85. Xu, Tian-Dong*; Sun, Li-Jun; **Peng, Zhong-Ren**; & Hao, Yuan (2011). Modeling drivers' en-route diversion behavior under variable message using real detected traffic data. *IET Intelligent Transport Systems*, 5(4), 294-301. doi:10.1049/iet-its.2011.0060
86. Xu, Tian-Dong*; Sun, Li-Jun; & **Peng, Zhong-Ren** (2011). Empirical Analysis and Modeling of Drivers' Response to Variable Message Signs in Shanghai, China. *Transportation Research Record: Journal of Transportation Research Board*, 2243, 99-107. doi:10.3141/2243-12
87. Xu, Xian-Rui*; & **Peng, Zhong-Ren** (2011). The K-function analysis of space-time point pattern on road network. *Proceedings 2011 19th International Conference on Geoinformatics*. doi:10.1109/GeoInformatics.2011.5981103
88. Zhao, Li-Yuan; & **Peng, Zhong-Ren** (2010). An Integrated Bi-Level Model to Explore the Interaction between Land Use Allocation and Transportation. *Transportation Research Record: Journal of Transportation Research Board*, 2176, 14-25. doi:10.3141/2176-02
89. Bin, Yang; Li, Yao-Yu*; & **Peng, Zhong-Ren** (2010). Multiple trip information based spatial domain optimisation for power management of plug-in hybrid electric vehicles. *International Journal of Electric and Hybrid Vehicles*, 2(4), 259 – 281. doi:10.1504/IJEHV.2010.03498
90. Gong, Qiu-Ming*; Li, Yao-Yu; & **Peng, Zhong-Ren** (2009). Trip Based Optimal Power Management of Plug-in Hybrid Electric Vehicles with Advanced Traffic Modeling. *SAE International Journal on Engines*, 1(1), 861-872.

91. Zhao, Tian*; Zhang, Chuan-Rong; Wei, Ming-Zhen; & **Peng, Zhong-Ren** (2008). Ontology-based Geospatial Data Query and Integration. *Lecture Notes in Computer Science: Geographic Information Science*, 5266, 370-392.
92. Zhang, Chuan-Rong*; **Peng, Zhong-Ren**; & Zhao, Tian; & Li, Wei-Dong (2008). Transforming transportation data models from UML to OWL ontological representation. *Transportation Research Record: Journal of Transportation Research Board*, 2064, 81-89. doi:10.3141/2064-11
93. **Peng, Zhong-Ren***; Zhu, Yi ; & Song, Shun-Feng (2008). Mobility of the Chinese Urban Poor – A Case Study of Hefei City. *The Chinese Economy*, 41(1), 36-57. doi:10.2753/CES-1097-1475410102
94. **Peng, Zhong-Ren***; & Kim, Eok (2008). A Standard-based Integration Framework of Distributed Transit Trip Planning Systems, *Journal of the Intelligent Transportation Systems*, 12(1), 13-19, doi:10.1080/15472450701849642
95. Gong, Qiu-Ming*; Li, Yao-Yu; & **Peng, Zhong-Ren** (2008). Trip-Based Optimal Power Management of Plug-in Hybrid Electric Vehicles. *IEEE Transactions on Vehicle Technology*, 57(6), 3393-3401. doi:10.1109/TVT.2008.921622
96. Huang Rui-Hong*; & **Peng, Zhong-Ren** (2008). A spatiotemporal data model for dynamic transit networks, *International Journal of Geographic Information Science*, 22(5), 527-545. doi:10.1080/13658810701492399
97. Pucher, John*; **Peng, Zhong-Ren**; Mittal, Neha; Zhu, Yi; & Korattyswaroopam, Nisha (2007). Urban Transport Trends and Policies in China and India: Impacts of Rapid Economic Growth. *Transport Reviews*, 27(4), 379-410. doi:10.1080/01441640601089988
98. **Peng, Zhong-Ren***; Hawks, Sarah; & West, Kate (2005). Use of planning support software in transit services: A state-of-practice survey. *Transportation Research Record: Journal of Transportation Research Board*, 1927, 128-136. doi:10.3141/1927-15
99. **Peng, Zhong-Ren*** (2005). A proposed framework for feature-level geospatial data sharing: a case study for transportation network data. *International Journal of Geographic Information Science*, 19(4), 459-481. DOI:10.1080/13658810512331319127
100. **Peng, Zhong-Ren***; Guequierre, Nathan; & Blakeman, Joseph C. (2004). Motorist Response to Arterial Variable Message Signs. *Transportation Research Record: Journal of Transportation Research Board*, 1899, 55-63. doi:10.3141/1899-07
101. Zhang, Chuan-Rong; & **Peng, Zhong-Ren*** (2004). The Roles of Geography Markup Language, Scalable Vector Graphics, and Web Feature Service Specifications in the Development of Internet Geographic Information Systems. *Journal of Geographical Systems*, 6(2), 95 – 116. doi:10.1007/s10109-004-0129-0
102. Sanchez, Thomas W.; Shen, Qing, & **Peng, Zhong-Ren** (2004). Transit Mobility, Jobs Access, and Low-Income Labor Participation in U.S. Metropolitan Areas, *Urban Studies*, 41(7), 1313–1331. doi:10.1080/0042098042000214815
103. Zhang, Chuan-Rong; Li, Wei; Day, Michael J.*; & **Peng, Zhong-Ren** (2003). GML-based Interoperable Geographical Database. *Cartography*, 32(2), 1-16. doi:10.1080/00690805.2003.9714249
104. **Peng, Zhong-Ren*** (2002). A Frame Work of Feature-Level Transportation Geospatial Data Sharing Systems. 82nd *Transportation Research Board Annual Meeting*, 19(4), 459-481.
105. **Peng, Zhong-Ren***; Yu, Dan-Lin; & Beimborn, Edward (2002). Transit User Perceptions of the Benefits of Automatic Vehicle Location. *Transportation Research Record: Journal of Transportation Research Board*, 1791, 127-132. doi:10.3141/1791-19

106. Huang, Rui-Hong*; & **Peng, Zhong-Ren** (2002). Object-Oriented Geographic Information System Data Model for Transit Trip-Planning Systems. *Transportation Research Record: Journal of Transportation Research Board*, 1804, 205-211. doi:10.3141/1804-27
107. Huang, Rui-Hong*; & **Peng, Zhong-Ren** (2002). Schedule-Based Path Finding Algorithms for Transit Trip Planning Systems. *Transportation Research Record: Journal of Transportation Research Board*, 1783, 142-148. doi:10.3141/1783-18
108. **Peng, Zhong-Ren*** (2001). Internet GIS for Public Participation. *Environment and Planning B: Planning and Design*, 28, 889-905. doi:10.1068/b2750t
109. **Peng, Zhong-Ren***; & Beimborn, Edward (2001). Breakeven Analysis for Statewide ITS Project Identification and Assessment. *Transportation Research Record: Journal of Transportation Research Board*, 1777, 105-115. doi:10.3141/1777-11
110. **Peng, Zhong-Ren***; & Huang, Rui-Hong (2000). Design And Development Of Interactive Trip Planning For Web-Based Transit Information Systems. *Transportation Research C: Emerging Technology*, 8(1-6), 409-425. doi:10.1016/S0968-090X(00)00016-4
111. Jan, Oliver*; Horowitz, Alan; & **Peng, Zhong-Ren** (2000). Using GPS Data to Understand Variations in Path Choice. *Transportation Research Record: Journal of Transportation Research Board*, 1725, 37-44. doi:10.3141/1725-06
112. Wiggins, Lyna; Deuker, Kenneth; Ferreira, Joseph; Merry, Carolyn; **Peng, Zhong-Ren**; & Spear, Bruce (2000). Application Challenges For Geographic Information Science: Implications For Research, Education, And Policy For Transportation Planning And Management. *Journal of the Urban and Regional Information Systems Association*, 12 (2), 51-59.
113. **Peng, Zhong-Ren*** (1999). An Assessment Framework of the Development Strategies of Internet GIS. *Environment and Planning B: Planning and Design*, 26 (1), 117-132. doi:10.1068/b260117
114. **Peng, Zhong-Ren***; & Jan, Oliver (1999). Assessing Means of Transit Information Delivery for Advanced Public Transportation Systems. *Transportation Research Record: Journal of Transportation Research Board*, 1666, 92-100. doi:10.3141/1666-11 (SCI)
115. Deuker, Kenneth J.; Groff, Jonathan N.; & **Peng, Zhong-Ren** (1998). An Enterprise GIS Database Design for Agency-wide Transit Applications. *Journal of the Urban and Regional Information Systems Association*, 10 (2), 46-55.
116. **Peng, Zhong-Ren***; Nelson, Arthur C. (1998). Rural Transit Services: A Local Economic and Fiscal Impact Analysis. *Transportation Research Record: Journal of Transportation Research Board*, 1623, 57-62. doi:10.3141/1623-08
117. **Peng, Zhong-Ren*** (1997). A Methodology for Design of GIS-based Automatic Transit Traveler Information Systems. *Computers, Environment and Urban Systems*, 21(5), 359-372. doi:10.1016/S0198-9715(98)00006-4
118. **Peng, Zhong-Ren*** (1997). Jobs-Housing Balance and Urban Commuting. *Urban Studies*, 34(8), 1215-1235. doi:10.1080/0042098975600
119. Nebert, Douglas; & **Peng, Zhong-Ren** (1997). An Internet-Based GIS Data Access System. *Journal of the Urban and Regional Information Systems Association*, 22 (1), 20-30.

120. **Peng, Zhong-Ren***, Dueker, Kenneth J.; Strathman, James & Hopper, Janet (1997). A Simultaneous Route-Level Transit Patronage Model, *Transportation*, 24(2), 159-181. doi:10.1023/A:1017951902308
121. **Peng, Zhong-Ren***; Dueker, Kenneth J.; & Strathman, Jamesz (1996). Residential Location, Employment Location and Commuter Responses to Parking Price. *Transportation Research Record: Journal of Transportation Research Board*, 1556, 109-118. doi:10.3141/1556-13
122. Dueker, Kenneth J. & **Peng, Zhong-Ren** (1995). Spatial Data Integration in Transit demand modeling. *Journal of the Urban and Regional Information Systems Association*, 7(1), 26-37.
123. **Peng, Zhong-Ren**; & Zhou, Xue-Qing (1998). Paradoxes in the Strategic Research. *Sciences, Shanghai, PRC*, 40(2). (in Chinese)

Conference Papers

1. Xu, Xian-Rui; Li, Xiao-Jie; & **Peng, Zhong-Ren** (2013). Analyzing urban population's space-time evolution and characteristics based on cell-phone location data – A case study in Shenzhen, China. *21st International Conference on Geoinformatics*. doi:10.1109/Geoinformatics.2013.6626032
2. Du, Rong-Yi; **Peng, Zhong-Ren**; & Lu, Qingchang (2012). Comparison of SMS Calculation Methods Based on NGSIM data for UAV Detection. *4th International Conference on Intelligent Human-Machine Systems and Cybernetics(IHMSC)*. doi:10.1109/IHMSC.2012.123
3. Fu, Xiao-Yan; **Peng, Zhong-Ren**; Liang, Qian-Yu; & Zhang, Ting-Feng. Aggregated Analysis Activity –Based Mode Split Models. *Second International Conference on Transportation Engineering*. doi:10.1061/41039(345)5
4. Lu, Qing-Chang; & **Peng, Zhong-Ren**. Modeling of Signal Cycle for Transit Priority. *Second International Conference on Transportation Engineering*. doi:10.1061/41039(345)236
5. Pang, Ying; Chang, Yun-Tao; **Peng, Zhong-Ren**; & Liang, Dui-Dui. Evaluation of Traffic Impact on Land Development Projects Based on Matter-Element Analysis. *Ninth International Conference of Chinese Transportation Professionals (ICCTP)*. doi:10.1061/41064(358)185
6. Liang, Dui-Dui; Chang, Yun-Tao; **Peng, Zhong-Ren**; & Pang, Ying. Analysis and Evaluation of Expressway Planning Schemes Based on Integrated Macro and Micro Simulation. *Ninth International Conference of Chinese Transportation Professionals (ICCTP)*. doi: 10.1061/41064(358)184
7. Bin, Yang; Li, Yao-Yu; Gong, Qiu-Ming; & **Peng, Zhong-Ren** (2009). Multi-Information Integrated Trip Specific Optimal Power Management for Plug-In Hybrid Electric Vehicles. *American Control Conference (ACC)*. doi:10.1109/ACC.2009.5160626
8. Gong, Qiu-Ming; Li, Yao-Yu; & **Peng, Zhong-Ren** (2008). Computationally efficient optimal power management for plug-in hybrid electric vehicles based on spatial-domain two-scale dynamic programming. *IEEE International Conference on Vehicular Electronics and Safety(ICVES)*. doi:10.1109/ICVES.2008.4640882
9. Gong, Qiu-Ming; Li, Yao-Yu; & **Peng, Zhong-Ren** (2008). Trip based optimal power management of plug-in hybrid electric vehicles using gas-kinetic traffic flow model. *American Control Conference*. doi:10.1109/ACC.2008.4586989
10. Zhao, Tian; Zhang, Chuan-Rong; Wei, Ming-Zhen; & **Peng, Zhong-Ren** (2008). Ontology-Based Geospatial Data Query and Integration. *5th International Conference on Geographic Information Science*. doi:10.1007/978-3-540-87473-7_24

11. Gong, Qiu-Ming; Li, Yao-Yu; & **Peng, Zhong-Ren** (2007). Trip Based Power Management of Plug-in Hybrid Electric Vehicle with Two-Scale Dynamic Programming. *Vehicle Power and Propulsion Conference(VPPC)*. doi:10.1109/VPPC.2007.4544089
12. Gong, Qiu-Ming; Li, Yao-Yu; & **Peng, Zhong-Ren** (2007). Optimal power management of plug-in HEV with intelligent transportation system. *IEEE/ASME International Conference on Advanced Intelligent Mechatronics*. doi:10.1109/AIM.2007.4412579
13. Gong, Qiu-Ming; Li, Yao-Yu; & **Peng, Zhong-Ren** (2007). Optimal Power Management of Plug-In Hybrid Electric Vehicles With Trip Modeling. *ASME International Mechanical Engineering Congress and Exposition*. doi:10.1115/IMECE2007-41638

Book Chapter

1. Peng, Zhong-Ren, Chao Liu, Ya Gao, 2018, Transport and air quality in China, (2018), in *HANDBOOK ON TRANSPORT AND URBAN TRANSFORMATION IN CHINA*, Edward Elgar Publishing, in press
2. **Peng, Zhong-Ren**, Zhanyong Wang, Chao Li, 2017, Urban Transportation and Haze Mitigation, in *Blue Book of Cities in China: Annual Report on Urban Development of China No. 10*, Social Sciences Academic Press (China), 2017, pp. 166-184. (In Chinese)
3. **Peng, Zhong-Ren**, China's Urban Transportation Management and Governance, in *China's Urban Governance*, Shanghai Jiao Tong University Press (China), 2017 (In Chinese)
4. Lu, Qing-Chang; **Peng, Zhong-Ren**; Perch, Sarah; & Shen, Su-Wan (2010). Chapter 25, Climate Change and Transportation. In Myer Kutz (Ed.), *Handbook of Transportation Engineering Volume II 2e* (pp. 35.1 – 35.24).
5. **Peng, Zhong-Ren**; Perch, Sarah; & Yang, Fei (2010). Chapter 9, Sustainable Transportation. In Myer Kutz (Ed.), *Handbook of Transportation Engineering Volume I 2e*.
6. **Peng, Zhong-Ren**; Zhang, Chuan-Rong; & Tian, Zhao (2010). Chapter 8, Geospatial Semantic Web Services: A case for transit trip planning systems. In Pei-Sheng Zhao & Li-Ping Di (Eds.), *Geospatial Web Services* (pp. 169-188).
7. Dueker, Kenneth J.; & **Peng, Zhong-Ren** (2008). Geographic Information Systems for Transport (GIS-T). In Hensher David A. & Kenneth J. Button (Eds.), *Handbook of Transport Modeling, Second Edition*. Bingley, UK: Emerald Group Publishing Limited.
8. **Peng, Zhong-Ren**; & Zhu, Yi (2007). Urban Transport in Chinese Cities: The Impact on the Urban Poor. In Laquian, Tewari & Hanley(Eds.), *The Inclusive City: Infrastructure and Public Services for the Urban Poor in Asia* (pp.144-170). Washington DC: Woodrow Wilson Center Press
9. **Peng, Zhong-Ren** (1991). An Analysis on Resource Management and Utilization in the City of Daqing. In Xiu-Guo Li (Ed.), *Urban Development Strategy Studies in China*. Beijing, PRC : Science Press. (in Chinese)

Book Review

1. Mushkat, Miron, *The Economic Future of Hong Kong*, reviewed by Peng, Zhong-Ren (1992), published in *Asian Perspective*, 16,153-156.
2. Plewe, Brandon, *GIS Online: Information Retrieval, Mapping, and the Internet*, Onword Press, reviewed by Peng, Zhong-Ren (1998), published in *the Journal of the American Planning Association*, Vol. 64, 492-493.

3. Chang, Kang-tsung (Karl) & Verbyla, David L., *Processing Digital Images in GIS*, Onword Press, reviewed by Peng, Zhong-Ren (1998), published in *the Journal of the American Planning Association*, Vol. 64, 492-493.

Other Academic Publications (Invited)

1. Peng, Zhong-Ren, & Zhang, C. (2005). A New Trend of Internet GIS Development: Geospatial Semantic Web Based on Services-Oriented Architecture. *GIS@development*, 9(10), 34-37.
2. Peng, Zhong-Ren, & Zhang, C. (2004). GML, WFS, SVG and the Future of Internet GIS. *GIS@development*, 8 (7), 29-32.
3. Beimborn, Edward, & Peng, Zhong-Ren (1998). Internet GIS: Applications in Transportation. *Transportation Research (TR) News*, 195, 22-26.
4. Peng, Zhong-Ren (1998). Internet GIS: A New Means of Information Sharing and Dissemination. *Civil Engineering (CE) News*.

SPONSORED RESEARCH (selected recent ones)

- 1 **Belmont Forum: Enabling Large-Scale Adaptive Integration of Technology Hubs to Enhance Community Resilience Through Decentralized Urban Food-Water-Energy Nexus Decision Support**, Sponsored by Belmont Forum/NSF, UF portion: \$258,956, August 2018 – July 2021
- 2 **“Evaluating the connection between transit and TNCs (Transportation Network Companies)”**, Sponsored by the Florida Department of Transportation, \$200,000, Role: PI, 9/1/2019 – 1/31/2021
- 3 **“Evaluating the effectiveness and funding mechanism of the Downtowner service in Tampa, Florida for statewide application”**, Sponsored by the Florida Department of Transportation, \$163,766, Role: PI, 8/15/2019 – 10/30/2020
- 4 **“Life Cycle Costs and Benefits Analysis of Freight Transportation Projects”**, supported by the Florida Department of Transportation, \$49,885, Role: PI, 6/15/2019 – 5/31/2020
- 5 **Florida Freight Transportation Economic Impact Kit (FTEIK)**, Sponsored by Florida Department of Transportation, \$38,000, June 2018 – December 2018, Role: PI
- 6 **Economic Analysis Framework for Freight Transportation Based on Florida Statewide Multi-Modal Freight Model**, Sponsored by Florida Department of Transportation, \$339,930, August 2016 – February 2018, Role: PI
- 7 **Identifying Tipping Points and Willingness to Pay for Adaptation Strategies to Sea Level Rise**, UF/IFAS Climate Change Seed Funding, \$149,931, February 2016 – June 2017, Role: Co-PI

- 8 **Coastal SEES (Track 1): Planning for hydrologic and ecological impacts of sea level rise on sustainability of coastal water resources**, OCE-1325227, Sponsored by National Science Foundation, \$476,904, August 2013 – July 2015, Role: Co-PI
- 9 **A Spatial-Temporal Econometric Model to Estimate Costs and Benefits of Sea-Level Rise Adaptation Strategies**, Sponsored by Florida Sea Grant, \$200,000, Feb. 2012 – Jan. 2014, Role: Principal Investigator
- 10 **Development of Sea Level Rise Adaptation Planning Procedures and Tools Using NOAA Sea Level Rise Impacts Viewer**, Sponsored by NOAA, \$185,000, Feb. 2012 – Jan. 2014, Role: Principal Investigator
- 11 **Florida Model Information eXchange System (MIXS)**, sponsored by Florida Department of Transportation, \$183,315, July 2011 - Dec. 2012, Role: Co-PI.
- 12 **Transportation, Land Use and Air Quality Modeling**, Sponsored by the Regional Planning Council of North Central Florida, \$154,700, July 2010 – June 2014, Role: Principal Investigator
- 13 **Development of a Prototype Land Use Model for Statewide Transportation Planning Activities**, sponsored by the Florida Department of Transportation, \$225,000, January 2009 – November 2011, Role: Principal Investigator.
- 14 **A Parameterized Climate Change Projection Model for Hurricane Flooding, Wave Action, Economic Damages, and Population Dynamics**, sponsored by NOAA, \$400,000, September 2009-January 2014, Role, Co-Principal Investigator.
- 15 **Needs Assessment of Land Use Modeling for FSUTMS, Phase I**, sponsored by the Center for Multimodal Solutions for Congestion Mitigation (CMS), \$25,000, June 2009 – January 2010, Role: Principal Investigator.
- 16 **A Geospatial Semantic Web Framework for Feature-Level Data Search, Access, Retrieval, Integration and Visualization: A Case of Transportation Network Data**, sponsored by the US National Science Foundation (NSF 0616957), \$255,890, June 2006 – Feb. 2010, Role: Principal Investigator
- 17 **Trip Based Optimal Power Management for Plug-in Hybrid Electric Vehicles**, Honda Initiation Grant award, \$50,000, October 2007 – September 2008, Role: Co-PI (with Prof. Yaoyu Li)
- 18 **“Use of AVL Technology to Optimize Transit Service Restoration Strategies,”** sponsored by the US Department of Transportation and Chicago Transit Authority, \$167,044, January 2007 – June 2008, Role: Principal Investigator
- 19 **“Real-time traffic management and surveillance using unmanned aerial vehicles,”** sponsored by the Research Growth Initiative of University of Wisconsin-Milwaukee,

- \$149,534, March 2007 – June 2008, Role: Principal Investigator (co-PIs: Jun Zhang and Tian Zhao)
- 20 **Feature-Level Data Sharing using OGC Web Feature Services: the Transportation Road Network Theme**, sponsored by the Federal Geographic Data Committee, \$100,000, Sept. 1, 2005 – Aug. 31, 2006. Role: Principal Investigator
 - 21 **Use of Geographic Information Systems for Transit Performance Measurement**: sponsored by the Federal Transit Administration, U.S. Department of Transportation, September 1, 2005 - September. 30, 2006. \$50,000. Role: Principal Investigator (Co-PI: Dr. Edwards Beimborn).
 - 22 **Integrated Transit Trip Planning Systems**: sponsored by the Federal Transit Administration, U.S. Department of Transportation, Wisconsin Department of Transportation and Wisconsin Department of Workforce Development: \$450,000. October 1, 2003 - Dec. 31, 2006. Role: Principal Investigator (Co-PI: Mr. Dixon Nuber).
 - 23 **Development of Advanced Multi-modal Travel Information Systems**: sponsored by the Wisconsin. Department of Transportation: \$306,741. Principal Investigator. September 2002 - September 2004.
 - 24 **An Evaluation of AVL Impacts on Small and Medium Sized Transit Agencies**, sponsored by the Wisconsin Department of Transportation. Funding: \$190,000. Role: Co-Principal Investigator (with Dr. Edward Beimborn). 10/2000 – 11/2005.
 - 25 **Advanced Transit Trip Planning Systems (Phase I-III)**: sponsored by the Federal Transit Administration, U.S. Department of Transportation, Wisconsin Department of Transportation and Wisconsin Department of Workforce Development: \$1,056,297. July 1, 2000 - June 30, 2004. Role: Principal Investigator (Co-PI: Mr. Dixon Nuber).
 - 26 **Transit Mobility, Jobs Access, And Low-Income Labor Participation in U.S. Metropolitan Areas** Funded by National Science Foundation, BCS-0078686, Co-PI (with Thomas Sanchez from Virginia Tech and Qing Shen from University of Maryland). Funding: \$165,000.
 - 27 **The Impact of Variable Message Sign (VMS) on Traveler's Behavior**: sponsored by the Federal Highway Administration and Wisconsin Department of Transportation: \$80,000. Principal Investigator. March, 2002 - Dec. 31, 2003.
 - 28 **ITS System Evaluation and Technology Development**, sponsored by the Wisconsin Department of Transportation. Funding: \$90,000. Role: Co-Principal Investigator (with Dr. Alan Horowitz). 8/99 – 6/01
 - 29 **A Framework of ITS Benefits Analysis**, sponsored by the Wisconsin Department of Transportation. Funding: \$40,000. Role: Co-Principal Investigator (with Dr. Edward Beimborn). 5/99 – 6/00

- 30 **An Assessment of the Development of Internet GIS and Its applications in Urban Planning**, sponsored by the Center for Urban Initiative and Research. Funding: \$13,500. Role: Principal Investigator. 5/97 – 6/98
- 31 **Evaluation of the Benefits of Automated Vehicle Location Systems**, sponsored by the Wisconsin Department of Transportation. Funding: \$75,000. Role: Co-Principal Investigator (with Dr. Edward Beimborn). 5/97 – 12/98
- 32 **Development of An Integrated Land Use, Transportation and Air Quality Model**, sponsored by the Graduate School Research Committee at University of Wisconsin-Milwaukee. Funding: \$11,525, Role: Principal Investigator, 1/97 – 6/98.
- 33 **Development of A National GIS Clearinghouse Node**, Funding: \$30,000 from U.S. Geographic Data Committee, Co-Principal Investigator (with Dr. Drummond), 2/96 -- 8/96.
- 34 **Route-Level Transit Patronage Modeling**, sponsored by Transportation Northwest Regional Center (TransNow) and Tri-Met. Funding: \$150,000, 10/92 -- 6/94, Role: dissertation project
- 35 **Alternative Transportation Analysis**, sponsored by Oregon Department of Land Conservation and Development. Funding: \$30,000, 7/92 -- 6/93, Role: Principal Investigator

PROFESSIONAL SERVICES AND AFFILIATIONS

Professional Services

- Editorial Board member of the Journal of Urban and Regional Information Systems Association (URISA) (2008 – current)
- Editorial Board member of the Journal of Intelligent Transportation Systems (2011 – current)
- Editorial board member of the *Journal of American Planning Association* (2002-2008)
- Transportation Research Board
 - Committee member of Geographic Information Science and Applications Committee (ABJ60) 2000 – current
 - Committee member of Transit Planning and Development (AP025), 2011 - current
 - Co-Chair, Sensing for Transportation Subcommittee, 2010 – current
- Chair of Board of Directors, International Association for China Planning, 2008-2011
- Member, Board of Directors, International Association for China Planning, 2005-2011
- Senior Advisor of US National Science Foundation (NSF), 2007-2010
- JAPA Best Article Award Committee, member, 2003-2004, Chair, 2004-2005.
- Board of Director, Urban and Regional Information Systems Associations (Oct. 2005 – Oct. 2008)
- Member of the Modeling Advisory Team, U.S. Department of Transportation, part of the President's E-Government Initiative -- Geospatial One-Stop (2003 – 2004)
- Vice-President, Society of Chinese American Professors and Scientists (2005 – 2006)
- Co-Chair, Asian Faculty and Staff Association at the University of Wisconsin-Milwaukee, 2004-2006

- Board member and Vice-President, North American Chinese Organization of Transportation Association (2005 – 2007)
- Board of Director and Chair, International Association for China Planning (2006 – 2011)

Professional Affiliations

- American Planning Association
- Institute of Transportation Engineers
- Transportation Research Board
- Urban and Regional Information Systems Association

Served as a referee for the following academic journals:

Journal of American Planning Association
Environment and Planning B
Transportation Research C
Transportation
International Journal of Geographic Information Sciences
Transportation Research Record
Networks and Spatial Economics
Journal of Urban and Regional Information Systems Association
ITS Journal
Papers in Regional Science
Computers, Environment and Urban Systems
ETRI Journal

INVITED PRESENTATIONS (selected)

1. Keynote Presentation: “Essential Research Questions and Progress in the Use of Unmanned Aerial Vehicles with Miniaturized Sensors for Atmospheric Environment Monitoring”, Invited by AGU JING Meeting, in Xi’An, China, Oct. 16-18, 2018
2. Keynote Presentation: “Artificial Intelligent and Urban Planning: from Assisted to Autonomous,” Invited by the Thirteenth International Conference on Urban Development and Planning, held at Suzhou, China, on July 26-27, 2018
3. Keynote Presentation: “Transportation, Air Quality and Healthy City,” Invited by the International Conference on Health and Environment in Human Settlements Conference, at Wuhan, on November 5-6, 2018
4. Invited by International Association for China Planning, Presented “Urban Micro Environment, Air Quality and the Future of Environment Planning,” at the International Association for China Planning (IACP) annual conference on June 17-18, 2017 at Harbin Institute of Technology (HIT) in Harbin, China
5. Invited by Hunan University in China, presented “Adaptation Planning for Climate Change” at The International Symposium of Hilly City and Architecture, held at the City of Changsha, China, on June 20-21, 2017
6. Invited by the International Association for China Planning (IACP), Land Use Optimization for Minimizing Urban Air Pollution, at the IACP annual meeting in Beijing, China, June,

2016

7. Invited by the Chinese Overseas Transportation Association (COTA), the Use of UAV for Traffic Information Systems, Presented at COTA Annual Conference in Shanghai in August 2016
8. Invited by the Atmospheric Environment Science Association in China, Vertical distributions of PM_{2.5} and O₃ based on UAV monitoring, presented at the 22nd Atmospheric Environment Science and Technology Annual meeting in Shanghai, China in Oct. 2016
9. Invited by Huazhong University of Science and Technology, presented “The Science behind Urban Planning,” at the International Expert Speaker Series, on November 10, 2017
10. Invited Presentation: Adaptation planning for sea level rise, at the International Symposium on Climate Change and Urban System Design, Hiroshima, Japan, Dec. 17-19, 2012
11. Invited Presentation: UAV applications in transportation research, at the 2012 IEEE Intelligent Transportation Systems Conference, Anchorage, September 16-19, 2012
12. Invited Presentation: Effectiveness of Unmanned Aerial Vehicles as An Aerial Sensor, at the 2012 International Conference of Transportation Professionals Conference, Beijing, China, August 3-6, 2012
13. Keynote speech: China’s Coordinated Urban and Rural Development Policy to Deal with Rapid Urbanization, European Forum – Alpbach, September 1-2, 2011, Alpbach, Austria.
14. Keynote Speech: Adaptation Planning to Climate Change and Extreme Weather Events, The “City” International Conference, October 31 – November 2, 2011, Shanghai, China
15. “A New Transportation Information Acquisition and Analysis Method Using Unmanned Aerial Vehicles,” Towards Sustainable Transportation Systems 2011, August 14-17, 2011, Nanjing, China.
16. “Managed Urban Growth -- Implications of Portland’s Experience to Cities in China,” at Harvard University, December 2003.
17. “A Framework for Feature-Level Geospatial Data Sharing Systems: A Case Study for Transportation Network Data,” at Harvard University, December 2003.
18. “Job-Housing Balance and Urban Commuting: Is there any Spatial Patterns?” at Massachusetts Institute of Technology, November 2003.
19. “An Object-Oriented Spatio-Temporal Model for Dynamic Transit Networks,” at Massachusetts Institute of Technology, October 2003.

CONFERENCE PRESENTATIONS (selected)

1. Adaptation planning for sea level rise, at the International Symposium on Climate Change and Urban System Design, Hiroshima, Japan, Dec. 17-19, 2012
2. Evaluation of the Applicability of Sea Level Rise Tools and Analysis in Adaptation Planning, at ACSP annual conference, Cincinnati, Nov. 1-4, 2012
3. UAV applications in transportation research, at the 2012 IEEE Intelligent Transportation Systems Conference, Anchorage, September 16-19, 2012
4. The effectiveness of UAV in transportation and urban planning, at The 1st symposium of humanity and social science and the 5th symposium of science, engineering, and biomedicine, Tampa, FL, Aug. 31 - Sept. 3, 2012
5. Effectiveness of Unmanned Aerial Vehicles as An Aerial Sensor, at the 2012 International Conference of Transportation Professionals Conference, Beijing, China, August 3-6, 2012

6. LandSys II: Forecast Land Use Change using Neural Networks, Multi-Agent, and GIS under Integrated Land Use and Transportation Framework, at the Transportation Research Board Annual meeting, Washington, DC, Jan. 22-26, 2012.
7. Applications of Unmanned Aerial Vehicles in Transportation, at the 91st Annual Meeting of Transportation Research Board at Washington, DC in January 2012.
8. Integrated Simulation Platform for Transportation and Land Use: Case Study of LandSys-FSUTMS in Orange County, Florida, at the 91st Annual Meeting of Transportation Research Board at Washington, DC in January 2012.
9. Adaptation Planning for Climate Change and Extreme Weather Events, ACSP, October 2011, Salt Lake City, Utah.
10. LiDAR Technology for Transportation Applications, at the 90th Annual Meeting of Transportation Research Board at Washington, DC in January 2011.
11. Simulating and Understanding Land Use Changes based on Cellular Automata and Multiagent Models, at the Association of Collegiate Schools of Planning (ACSP) Conference, Minneapolis, Minnesota, in October 2010.
12. Vertical Data Accuracy on Estimating the Effects of Sea Level Rise on Local Highway Infrastructure, at the 89th Annual Meeting of Transportation Research Board at Washington, DC in January 2010.
13. Risk Assessment and Minimization of Climate Change on Transportation Networks, at the Association of Collegiate Schools of Planning (ACSP) Conference, Crystal City, Virginia, in October 2009.
14. Scenario-Based Vulnerability Analysis For Climate Change Adaptation In Long Range Transportation Planning, at the Association of Collegiate Schools of Planning (ACSP) Conference, Crystal City, Virginia, in October 2009.
15. Understanding Transit Service Gaps, at the 88th Annual Meeting of Transportation Research Board at Washington, DC in January 2009.
16. Summarizing and Comments on the Conference of Symposium on Mega-Regions and Spatial Planning: An International Perspective, Peking, October 2008
17. Information Technology for Planning: Research and Education, at the American Collegiate School of Planning Leadership Conference, Washington DC, October 2008
18. Ontology-based Geospatial Data Query and Integration, Fifth International Conference on Geographic Information Science, Park City, Utah, September 2008
19. Understand Transit Service Reliability and Service Restoration, at the Association of Collegiate Schools of Planning (ACSP) and the Association of European Schools of Planning (AESOP) Joint Congress, Chicago, July 2008
20. Integrated Land Use, Transportation and Urban Development Modeling in A Rapid Urbanization and Motorization Environment, at 2008 International Forum on Urban Development and Planning, Langfang, China, June 2008.
21. Transforming transportation data models from UML to OWL ontological representation, at the Transportation Research Board Annual Meeting, January 2008.
22. Geospatial Data Sharing Technology -- History and New Development, at the China International Conference on Digital City, Shenzhen, China, Sept. 2007
23. Urban Growth Management and Transportation Planning -- Implications of Portland's Experience to Chinese Cities, at 2007 International Forum on Urban Development and Planning, Beijing, China, July 2007.

24. "The Challenges in Urban Transportation Planning in China." at the annual meeting of the Association of Collegiate Schools of Planning at Portland in November 2004. Abstract refereed and national conference.
25. "Urban Transportation Strategies and its Impacts on the Urban Poor in China." at the Comparative Urban Studies Symposium at Delhi, India in June 2004. Full paper refereed and international conference.
26. "Urban Simulations in Urban Planning," at the International Conference of Transportation Planning and Management at Wuhan, China. Abstract refereed and international conference.
27. "Motorist Response to Arterial Variable Message Signs" at the 83rd Annual Meeting of Transportation Research Board at Washington, DC in January 2004.
28. "The Roles of Geography Markup Language, Scalable Vector Graphics, and Web Feature Service Specifications in the Development of Internet Geographic Information Systems," at the Urban and Regional Information Systems Association Annual Meeting at Atlanta, October 2003.
29. "Motorist Response to Arterial Variable Message Signs," at the 82nd Annual Meeting of Transportation Research Board at Washington, DC in January 2003.
30. "Internet GIS: A State of the Art Review," at the Association of Collegiate Schools of Planning annual meeting in Baltimore in November 2002.
31. "Transit User's Perceptions of AVL Benefits" at the 81st Annual Meeting of Transportation Research Board at Washington, DC in January 2002.
32. "Schedule-Based Path Finding Algorithms for Transit Trip Planning Systems," at the 81st Annual Meeting of Transportation Research Board at Washington, DC in January 2002.
33. "An Object-Oriented GIS Data Model for Transit Trip Planning Systems" at the 81st Annual Meeting of Transportation Research Board at Washington, DC in January 2002.
34. "Mobile GIS for Transportation," at the GIS Applications in Transportation annual Symposium at Virginia in April 2001.
35. "An Object-Oriented system design for Web-based transit information systems" at the GIS Applications in Transportation annual Symposium at Virginia in April 2001.
36. "Breakeven analysis for statewide ITS project assessment." at the 80th Annual Meeting of Transportation Research Board at Washington, DC in January 2001.
37. "A GIS-based path-finding algorithm for transit network analysis." at the 80th Annual Meeting of Transportation Research Board at Washington, DC in January 2001.
38. "Design and development of interactive trip planning for Web-based transit information systems" at the Association of Collegiate Schools of Planning annual meeting at Atlanta in November 2000.
39. "Internet GIS for Web-based transit information systems" at the GIS Applications in Transportation annual Symposium at Minneapolis in March 2000.
40. "Commuters' Path Choice Analysis," at the Association of Collegiate Schools of Planning Meeting in Chicago, November 1999
41. "Evaluation of the Benefits of Automated Vehicle Location Systems for Small and Medium Sized Transit Agencies," at the 77th Annual Meeting of Transportation Research Board in Washington, D.C., January 1999
42. "An Assessment of Means of Transit Information Delivery," at the 77th Annual Meeting of Transportation Research Board in Washington, D.C., January 1999
43. "Data Sharing Using Internet GIS: Is What You See What It Means?" at the URISA (Urban and Regional Information Systems Association) 1998 Annual Conference, Charlotte, NC, July 1998

44. "Linking Internet GIS with Intelligent Transportation Systems," at the Geoinformatics '98, Beijing, China, June 1998
45. "Transportation Information Dissemination Using Internet GIS," at the GIS-T '97 Conference in Snowbird, Utah, March 1998
46. "Integrating GIS with the Internet: Development of Internet GIS," at the Association of Collegiate Schools of Planning Meeting in Ft. Lauderdale, Florida, November 1997
47. "Travelers' Stated Choices to Cope with Traffic Congestion," at the Association of Collegiate Schools of Planning Meeting in Ft. Lauderdale, Florida, November 1997
48. "An Assessment of the Development of Internet GIS," at GIS-T '97 Conference in Greensboro, North Carolina, March 1997
49. "A GIS-Based Automatic Trip Planning for Advanced Public Transportation Systems," at the Geoinformatics '96, West Palm Beach, Florida, April 1996
50. "An Internet-based Geospatial Data Distributed System," at GIS-T '96 Conference in Kansas City, Kansas, March 1996
51. "Residential location, employment location and commuter responses to parking charges," at the 75th Annual Meeting of Transportation Research Board in Washington, D.C., January 1996
52. "An Enterprise GIS Database Design for Transit Applications," at the National Conference of GIS in Transit in Tampa, Florida, August 1995, also at the GIS-T '95 Conference in Reno, Nevada, April 1995
53. "Linking GIS and Transit Demand Modeling," at the Fifth National Conference on Transportation Planning Methods Applications in Seattle, Washington, June 1995
54. "A Simultaneous Route-Level Transit Patronage Model," at the 74th Annual Meeting of Transportation Research Board in Washington, D.C., January 1995
55. "A GIS Database for Route Level Transit Demand Modeling," at GIS-T '94 Conference in Norfolk, Virginia, March 1994
56. "Inter-Route Relationship in Transit Network," at the 73rd Annual Meeting of Transportation Research Board in Washington, D.C., January 1994
57. "Error and Accuracy in Spatial Data Allocation," in GIS/LIS '93, Minneapolis, November 1993