

# Curriculum Vitae

**Neng Wan**

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Department of Geography  
University of Utah  
Salt Lake City, UT 84112

Phone: +1.801.585.3972  
Fax: +1.801.581.8219  
Email: neng.wan@geog.utah.edu

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## Education

- 2011 Ph.D. Geographic Information Science, Texas State University-San Marcos
- 2006 M.S. Cartography and GIS, Wuhan University, China
- 2003 B.S. Geodesy, Wuhan University, China

## Professional Experience

- 2014- Assistant Professor, Department of Geography, University of Utah
- 2014- Director, The Utah Geo-Health Lab, Department of Geography, University of Utah
- 2011-2014 Post-doctoral Research Associate, College of Public Health, University of Nebraska Medical Center
- 2007-2011 Teaching/Research Assistant, Department of Geography, Texas State University – San Marcos
- 2004-2006 Research Assistant, Virtual Reality Lab, Wuhan University

## Research Interests

- Foci: Aging, Physical Activity, Health Disparity, Access to Healthcare, Environmental Exposure, Human-Environment Interactions
- Methods: GIS, Spatial modeling, Quantitative methods

## Publication

### *Peer-reviewed Journal Articles*

#### Accepted/In Press/Published

- 24. **Wan, N** & G. Lin. 2016. Addressing Location Uncertainties in GPS-based Activity Monitoring: a Methodological Framework. *Transactions in GIS* (accepted)
- 23. **Wan, N** & G. Lin. 2016. Classifying Human Activity Patterns from Smartphone Collected GPS data: A Fuzzy Classification and Aggregation Approach. *Transactions in GIS*. DOI. 10.1111/tgis.12181
- 22. **Wan, N** & G. Lin. 2015. Parkinson's Disease and Pesticides Exposure: New Findings from a Comprehensive Study in Nebraska, USA. *Journal of Rural Health*: DOI: 10.1111/jrh.12154

21. **Wan, N.** 2015. Pesticides exposure modeling based on GIS and remote sensing land use data. *Applied Geography* 56: 99-106.
20. Siahpush, M., Shaikh, R. A., Hyland, A., Smith, D., Sikora Kessler, A., Meza, J., **Wan, N** & Wakefield, M. 2015. Point-of-sale cigarette marketing, urge to buy cigarettes, and unplanned purchases of cigarettes: Results from a population-based survey. *Nicotine and Tobacco Research* (In Press).
19. Siahpush, M., Shaikh, R.A., Cummings, K.M., Hyland, A., Dodd, M., Carlson, L., Kessler, A. S., Meza, J., **Wan, N.**, Wakefield, M. 2015. The association of point-of-sale cigarette marketing with cravings to smoke: results from a cross-sectional population-based study. *Tobacco Control*: doi:10.1136/tobaccocontrol-2015-052253
18. Zou, B., Luo, Y., **Wan, N.**, Zheng, Z., Sternberg, T., and Liao, Y. 2015. Performance comparison of LUR and OK in PM2.5 concentration mapping: a multidimensional perspective. *Scientific Reports* 5: 8698
17. Zou, B., Zhong, Z., **Wan, N**, Qiu, Y., and J, Wilson. 2015. An Optimized Spatial Proximity Model for Particulate Matter Air Pollution Exposure Assessment in Areas of Sparse Monitoring. *International Journal of Geographic Information Science* 30(4): 727-747.
16. Zou, B., Peng, F., **Wan, N.**, Mamady, K., and Wilson, J. 2014. Spatial cluster detection of air pollution exposure inequality in the United States. *PLOS ONE* 9 (3)
15. Zou, B., Peng, F., **Wan, N.**, Wilson, J. 2014. Sulfur dioxide exposure and environmental justice: a multi-scale and source-specific perspective. *Atmospheric Pollution Research* 5: 491-499.
14. Dong, M., Zou, B., Pu, Qian., **Wan, N.**, Yang, L., Luo, Y. 2014. Spatial pattern evolution and causal analysis of county level economy in Chang-Zhu-Tan urban agglomeration, China. *Chinese Geographical Science* 24(5): 620-630.
13. **Wan, N.**, Lin, G. 2013. Life-space characterization from cellular telephone collected GPS data. *Computers, Environment and Urban Systems* 39: 63-70.
12. **Wan, N.**, Qu, W., Whittington, J., Witbrodt, B., Henderson, M., Goulding, E., Schenk, A., Bonasera, S., and Lin, G. 2013. Assessing smart phones for generating life space indicators. *Environment and Planning B: Planning and Design* 40(2): 350-361.
11. **Wan, N.**, Zhan, FB., Zou, B., and Wilson, JG. 2013. Spatial access to healthcare services and disparities in colorectal cancer stage at diagnosis in Texas. *The Professional Geographer* 65(3): 527-541.
10. **Wan, N.**, Zou, B., Sternberg, T. 2012. A three-step floating catchment area method for analyzing spatial access to health services. *International Journal of Geographic Information Science* 26(6): 1073-1089.
9. **Wan, N.**, Zhan, FB., Lu, Y., and Tiefenbacher, J. 2012. Access to health care and disparities in colorectal cancer survival in Texas. *Health & Place* 18(2): 321-329.
8. **Wan, N.**, Zhan, FB., Zou, B., and Chow, T. 2012. A relative spatial access assessment approach for analyzing potential spatial access to colorectal cancer services in Texas. *Applied Geography* 32(2): 291-299.
7. **Wan, N.**, Zhan, FB., and Cai, Z. 2011. Socioeconomic disparities in prostate cancer mortality and the impact of geographic scale. *Southern Medical Journal* 104(8): 553-559.
6. Ma, H., Wu, X., Zou, B., Meng, X., and **Wan, N.** 2012. An algorithm for daytime radiation fog detection based on MODIS/TERRA data over land. *Journal of Applied Remote Sensing* 6(1): 063589, doi: 10.1117/1.JRS.6.063589.

5. Shen, J., Yang, M., Zou, B., **Wan, N.**, and Liao, Y. 2012. Outlier detection of air temperature series data using probabilistic finite state automata based algorithm. *Complexity* 17(5): 48-57.
4. **Wan, N.**, Zhan, FB., and Cai, Z. 2011. A spatially weighted degree model for network vulnerability analysis. *Geo-spatial Information and Science* 14(4): 274-281.
3. Zhu, Q., Wu, B., and **Wan, N.** 2007. A filtering strategy for interest point detecting to improve repeatability and information content. *Photogrammetric Engineering & Remote Sensing* 73(5): 547-53.
2. Zhu, Q., Wu, B., and **Wan, N.** 2007. A sub-pixel location method for interest points by means of the Harris interest strength. *The Photogrammetric Record* 22(120): 321-35.
1. Zhu, Q., Wu, B., **Wan, N.**, Xu, Z., and Tian, Y. 2006. An interest point detection method to stereo images with good repeatability and information content. In Chinese, *Acta Electronica Sinica* 34(2): 205-09.

### Manuscripts in Progress

- Wan, N.**, Siahpush, M., Shaikh, R. A., McCarthy, M., Ramos, R., Correa, A. Point-of-sale e-cigarette marketing among tobacco stores (under review)
- Wan, N.**, Siahpush, M., Shaikh, R. A., McCarthy, M., Ramos, R., Correa, A. The association of e-cigarette marketing with socioeconomic and demographic characteristics of neighborhoods (under review)
- Siahpush, M., Shaikh, R. A., **Wan, N.**, et al. Neighborhood exposure to point-of-sale cigarette promotions is associated with financial stress among smokers: Results from a population-based study (under review)
- Wen, M., Fan, J., **Wan, N.**, Kowaleski-Jones, L. Rural-urban Disparities in Overweight and Obesity among Working Age Adults in the United States: Patterns and Mechanisms (under review)
- Wan, N.**, G, Lin., H, Wang., S, Bonasera., K, Schenk., D, Li., J, Kwan. Characteristics of smartphone-based life-space measures (in preparation)
- Li, D and **Wan, N.** Mobile Monitoring (MM): a software system for m-health data collection and analysis (in preparation)
- Wan, N.**, M, Wen., J, Fan., S, McCormick. Obesity intervention among Asian Pacific Islanders: is mobile technology an option? (in preparation)

## **Grants**

### Active

#### *External*

**Understanding life-space characteristics based on smart-phone collected data.** 2013-2016. Principal Investigator: **Neng Wan.** National Institute of Health (R03). (USD \$148,480)

#### *Internal*

**A Pilot Study to Design an Intervention on Promoting Physical Activity among Tongans in Salt Lake City, Utah.** 2015-2016. PI: **Neng Wan** (with Co-PI Ming Wen) The Interdisciplinary Pilot Program, College of Social and Behavior Sciences, University of Utah. (USD \$9,700)

**Interactions between life-space and quality of life in spousal dyads coping with chronic conditions.** 2015-2016. PI: **Neng Wan** (with Co-PI Linda Edelman) The Consortium for Families and Health Research Pilot Grant, University of Utah. (USD \$16,000)

**Understanding and promoting physical activities using mobile technologies.** 2015-2016. PI: **Neng Wan**. College of Social and Behavioral Sciences, University of Utah, Research Incentive Program. (USD \$5,800)

### **Finished**

**Spatial-temporal modeling and validation of urban air pollution variations under multi-type geographical factors.** 2013-2015. Principal Investigator: Bin Zou (Central South University). Co-PI: **Neng Wan** (and others). Natural Science Foundation of China (NSFC). (Chinese RMB: ¥300,000 (USD \$47,000))

**Determinants of Breast Cancer Survival in Nebraska, 1997-2010.** 2014. Principal Investigator: Soumitra Bhuyan. Co-I: **Neng Wan**. The Nebraska Joint Public Health Data Center. (USD \$3,700)

**Disparities in exposure to point-of-sale tobacco stores in Omaha, Nebraska.** 2013-2014. Subcontract from a funded NIH R01 grant titled “The effect of point-of-sale tobacco marketing on smoking cessation (PI: Mohammad Siahpush)”. (USD \$8,000)

### **Not Funded**

**Healthy Body Healthy Mind: evaluating an elementary school physical activity intervention program.** PI: Jessie Fan. Co-I: **Neng Wan** (and others) NIH R01 (USD \$2,265,373)

**Leveraging technology and geographic activity space to promote healthy lifestyles.** PI: Xinyue Ye. Co-PI: **Neng Wan** NIH R03 (\$150,000)

**Validating the use of location-based social media to explore association between food accessibility and obesity.** PI: Xinyue Ye. Co-I: **Neng Wan** (and others) NIH R03 (\$150,000)

**Physical Activity Intervention via Mobile Technologies in Urban China.** PI: **Neng Wan** (with Co-PI Ming Wen). NIH R21 (USD \$348,000)

**Measuring Physical Activity with Integrated Accelerometer and GPS in Smartphones.** PI: **Neng Wan** (with Co-PI Jessie Fan). NIH R21 (USD \$400,000)

**Investigating and reducing air pollution exposures in two of the nation’s most frequent PM2.5 wintertime violators using community engaged research and networked low-cost sensors.** PI: Scott Collingwood. Co-I: **Neng Wan** (and others). EPA Science to Achieve Results (STAR) grant (USD \$750,000)

### **Presentations**

- Wan, N.**, Dassel, K., Edelman, L., Farrell, T., et al. 2016. Interactions Between Life-Space and Quality of Life in Spousal Dyads Coping with Chronic Conditions. The Gerontological Society of America's 69th Annual Scientific Meeting. New Orleans, LA
- Wan, N.** 2016. Parkinson's Disease and Pesticides Exposure: New Findings from a Comprehensive Study in Nebraska, USA. Annual Meeting of the Association of American Geographers, San Francisco, CA, April 1, 2016.
- Wan, N.** 2015. Understanding life-space characteristics based on smart-phone collected data. Annual Meeting of the Association of American Geographers, Chicago, IL, April 23, 2015.
- Wan, N.**, Siahpush, M., McCarthy, M., Ramos, R., Correa, A., Shaikh, R. 2015. The association of e-cigarette marketing with socioeconomic and demographic characteristics of neighborhoods. Poster presentation at the 21<sup>st</sup> Annual Meeting of the Society for Research on Nicotine and Tobacco, Philadelphia, PA
- Wan, N.**, Siahpush, M., McCarthy, M., Ramos, R., Correa, A., Shaikh, R. 2015. Point-of-sale e-cigarette marketing among tobacco stores. Poster presentation at the 21<sup>st</sup> Annual Meeting of the Society for Research on Nicotine and Tobacco, Philadelphia, PA
- Shaikh, R. A., Siahpush, M., **Wan, N.** 2015. Association of socio-demographic and smoking related factors with the use of e-cigarettes among current smokers: results from a population based study. Poster presentation at the Society for Research on Nicotine and Tobacco 2015 Annual Meeting. Philadelphia, PA. February 25-28, 2015.
- Shaikh, R. A., Siahpush, M., **Wan, N.** 2015. The association of self-reported exposure to point-of-sale cigarette marketing with smoking induced deprivation in a population-based study. Poster presentation at the Society for Research on Nicotine and Tobacco 2015 Annual Meeting. Philadelphia, PA. February 25-28, 2015.
- Siahpush, M., Shaikh, R. A., Cummings, K.M., Hyland, A., Dodd, M., Carlson, L., Sikora Kessler, A., Meza, J., Wakefield, M. & **Wan, N.** 2015. The association of self-reported exposure to point-of-sale cigarette marketing with urge to buy cigarettes and make an unplanned purchase of cigarettes in a population-based study. Poster presentation at the Society for Research on Nicotine and Tobacco 2015 Annual Meeting. Philadelphia, PA. February 25-28, 2015.
- Siahpush, M., Shaikh, R. A., Cummings, K.M., Hyland, A., Dodd, M., Carlson, L., Sikora Kessler, A., Meza, J., Wakefield, M. & **Wan, N.** 2015. The association of self-reported exposure to point-of-sale cigarette marketing with craving to smoke in a population-based study. Poster presentation at the Society for Research on Nicotine and Tobacco 2015 Annual Meeting. Philadelphia, PA. February 25-28, 2015.
- Wan, N.** 2014. (invited talk) GIS applications in public health, healthcare, and the environment. The Utah Department of Health, Salt Lake City, UT
- Wan, N.** 2014. Deploying Mobile Monitoring for Aging Research: Conceptual and Methodological Perspectives. American Public Health Association 142<sup>nd</sup> Annual Meeting. New Orleans, LA
- Bhuyan, SS., **Wan, N.**, Deras, M, and Stimpson, JP. 2013. Access to Primary Care in Nebraska: An Integrated Approach. Nebraska Public Health Association Annual Conference, Grand Island, NE

Bhuyan, SS., **Wan, N.**, Deras, M, and Stimpson, JP. 2013. Spatial and social factors associated with access to primary care in Nebraska. Rural Futures Conference, Lincoln, NE

**Wan, N.** 2013. (invited talk) Deploying mobile GIS for aging research, a methodological perspective. University at Buffalo, Buffalo, NY

**Wan, N.**, and Lin, G. 2013. Application of Mobile Technologies in Aging Research: A Case Study of Life-Space. XVth International Symposium in Medical/Health Geography, East Lansing, MI, July 9, 2013.

**Wan, N.**, and Lin, G. 2013. Classifying Smartphone Collected GPS Data for Environment-health Studies. Annual Meeting of the Association of American Geographers, Los Angeles, CA, April 12, 2013.

**Wan, N.** 2013. (invited talk) Applying GeoSpatial Technologies in Medical/Health Geography. Binghamton University, Binghamton, NY

**Wan, N.**, and Lin, G. 2012. Applying smart-phone and GIS in health research: a pilot study. Poster session of The 1<sup>st</sup> International Conference on Space, Time, and CyberGIS, Champaign, IL, August 6-8, 2012

**Wan, N.**, and Lin, G. 2012. Using cell-phone GPS data to monitor adult life-space: a feasibility assessment. Annual Meeting of the Association of American Geographers, New York, NY, February 28, 2012.

**Wan, N.**, and Zhan, FB. 2011. Disparities of colorectal cancer diagnosis in Texas, 1996-2003. Annual Meeting of the Association of American Geographers, Seattle, WA, March 2011.

**Wan, N.** 2010. A 3-step floating catchment area method for characterizing potential spatial access to medical services. Annual meeting of the Association of American Geographers, Southwestern Division. Tahlequah, OK, October 2010.

**Wan, N.** 2010. Socioeconomic disparity of prostate cancer mortality in Texas. 2<sup>nd</sup> Annual Cancer Research Symposium, Texas State University-San Marcos, San Marcos, TX, April 2010.

**Wan, N.**, and Zhan, FB. 2010. Socioeconomic disparities of prostate cancer mortality and the impact of geographic scale. Annual Meeting of the Association of American Geographers, Washington, DC, April 2010.

**Wan, N.**, and Zhan, FB. 2009. Economic development and public health: What happened to the Austin-San Antonio Corridor during 2000-2006. Annual Meeting of the Association of American Geographers, Las Vegas, NV, April 2009.

**Wan, N.**, and Zhan, FB. 2008. A spatially weighted degree model for network vulnerability analysis. Poster session of the Annual Meeting of the Association of American Geographers, Boston, MA, April 2008.

## **Awards and Scholarships**

- NSF Travel Award (\$1000) to the 1<sup>st</sup> International Conference on Space, Time, and CyberGIS, 2012

- Third place of student paper competition, Southwestern Division, Association of American Geographers, Tahlequah, OK, 2010
- Graduate College Scholarship, Texas State University-San Marcos, 2008, 2009, 2010

## Teaching

### Courses Taught at the University of Utah

Principals of Cartography	Fall 2015-
Introduction to Medical Geography	Spring 2015-
GIS and Public Health	Spring 2015-
Topics in Medical/Health Geography	Fall 2014-

### Courses Taught at Nebraska Department of Health & Human Services

GIS Applications in Public Health	Spring 2012-2014
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### Courses Taught at the University of Nebraska Medical Center

Medical Geography and Spatial Methods in Health Services (Co-lecturer)	Fall 2012-2013
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### Courses Taught at Texas State University-San Marcos

Fundamentals of GIS (Lab Instructor)	Spring 2010
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## Student Advising

### Graduate Committee Membership

#### 1. Ph.D.

2016-present	Matthew McCullough (as major advisor)
2015-present	Rebecca Steed (as major advisor)
2015-present	Emily Nicolosi
2015-present	Brent Lloyd
2015-present	Ryan Hile
2014-present	Victor Alaves
2015-2016	Dapeng Li
2014-2016	Han Li
2015-2016	Ling Zhang

#### 2. Master's

2016-present	Steven Lizotte (as major advisor)
2015-present	Andrea Davis (as major advisor)
2015-present	Aaron Pulver
2014-2015	Ryan Hile
2014-2016	Seth Bishop
2014-2016	Colby Page

## Services

Journal Review

*Scientific Reports* 2016  
*International Journal of Health Geographics* 2014, 2015  
*Health & Place* 2015, 2016  
*Computers, Environment and Urban Systems* 2014-2016  
*Applied Geography* 2015  
*BMC Health Services Research* 2015  
*BMC Public Health* 2016  
*Southern Medical Journal* 2011-2016  
*International Journal of Geographic Information Science* 2015  
*International Journal of Applied Geospatial Research* 2013  
*Cancer Causes and Control* 2012  
*Soil and Sediment Contamination* 2011-2013  
*International Journal of Health Policy and Management* 2014

#### Grant Review

*Israel Ministry of Science and Technology*, 2015

#### Department/College Services

*C-FAHR Cluster Hire Search Committee, College of Social and Behavioral Sciences, University of Utah*, 2015-2016  
*Advisory Board, Health, Society, & Policy Program, College of Social and Behavioral Sciences, University of Utah*, since 2015  
*Undergraduate Committee, Department of Geography, University of Utah* 2015  
*Graduate Committee, Department of Geography, University of Utah* 2014, 2015  
*Colloquia Committee, Department of Geography, University of Utah* 2014, 2015  
*Pre-Med Student Colloquium Committee, College of Social and Behavioral Sciences, University of Utah* 2015

#### Out Services

*Committee Member, Cancer Cluster Investigation Protocol, Utah Department of Health* 2016  
*Guest Lecturer, Churchill Junior High, Salt Lake City, Utah* 2016

#### Conference services

*Session Organizer and Chair (Agriculture, Environment, and Health)*, Annual Meeting of the Association of American Geographers, San Francisco, CA, April 1, 2016.  
*Session Chair (GIS: Challenges for Analysis)*, Annual Meeting of the Association of American Geographers, New York, NY, February 28, 2012.  
*Session Chair*, 5th Annual Texas Geography Student Research Symposium (TxGSRS), Texas State University-San Marcos, April 2009



## **Professional Organizations**

Member of the Association of American Geographers (AAG), since 2007

Member of the American Public Health Association (APHA), since 2014

Member of the International Association of Chinese Professionals in Geographic Information Sciences (CPGIS), since 2010