
BIOGRAPHICAL SKETCH

NAME: Junfeng Jiao

eRA COMMONS USER NAME: JJ32695

POSITION TITLE: Assistant Professor, School of Architecture

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date MM/YYYY	FIELD OF STUDY
Wuhan University, Wuhan China	BEng	07/2001	Urban Planning
Wuhan University, Wuhan China	MEng	07/2004	Architecture
University of Twente, Enschede, Netherlands	MS	07/2004	GIS
University of Washington, Seattle, WA	MS	07/2009	Transportation Engineering
University of Washington, Seattle, WA	PhD	12/2010	Urban Planning
University of Washington, Seattle, WA	Postdoc	2010-2011	Urban Form Lab

A. Personal Statement

I am an Urban Planner and Urban Researcher. My research interest is healthy community planning and design, which intersects with two of the PRCs primary research areas: Education, Work, and Inequality and Population Health. I especially focus on two research areas as: 1) Food Access and Population Health and 2) Urban Form and Physical Activity. For the food research, I investigate how planning can be used to improve people's access to healthy food and reduce people's access to unhealthy food. For the physical activity research, I investigate how built environments affect people's walking, biking and transit riding activities. Related to these research areas, I use GIS and crowdsourcing technologies to collect and measure urban form, built environment, food access, and physical activity. I analyze these data through spatial and statistical analysis. Based on my research interests, I teach classes in GIS and Physical Planning, which enables me to test and evaluate different population health related research findings through case studies and real projects. In the next five years, I will be exploring the application of wearable devices, crowdsourcing, and big data in measuring people's daily physical activity, food intake, and energy consumption along with the related population health consequences. Three research proposals to support the proposed works are under development and will be submitted to the National Institutes of Health, National Science Foundation, and Robert Wood Johnson Foundation. I currently serve as a consultant on one PRC managed NIH R01 project. As a junior faculty, I plan to join PRCs' grant writing Boot Camp in 2017 summer and use this wonderful opportunity to further develop one separated NIH R21 grant research idea.

I am very impressed by the PRC's infrastructure supports and mentoring. PRC leaders have great views and deep knowledge on current and future demography and population health research. PRC staff members are very professional and have a strong executive ability on grant submission and management. I have full confidence to work with the PRC's scientific team to develop my research proposals and further submit them. I also completely trust PRC's administration to manage my future research grants. I foresee that the PRC will play a critical role in my future scientific research career at the University of Texas at Austin.

B. Positions and Honors**Positions and Employment**

2010-2011 University of Washington College of Built Environments, Post-doctoral Fellow
2011-2013 Ball State University, College of Architecture and Urban Planning, Assistant Professor
2013-present The University of Texas at Austin, School of Architecture, Assistant Professor
2013-present The University of Texas at Austin, Center for Sustainable Development, Faculty Fellow
2013-present The University of Texas at Austin, Urban Information Lab, Director

Other Experience and Professional Memberships

2006- Member, American Collegiate Schools of Planning
2007- Member, American Planning Association

2007-	Member, International Association for China Planning
2008-	Member, National Research Council Transportation Research Board
Present	Member, Editorial Board, <i>AIMS Public Health</i>
Present	Member: American Collegiate Schools of Planning (ACSP); Association of Chinese Scientists and Engineers (ACSE); American Planning Association (APA); American Society of Civil Engineers (ASCE); Chinese Overseas Transportation Association (COTA); IEEE Committee on Connected Vehicles; International Association for China Planning (IACP); Indiana Academy of Science (IAS); Transportation Research Board (TRB) Committee on GIS and Applications (ABJ60)

Honors

2003	Netherlands Government Fellowship, the Netherlands Government
2010	Boeing Academic Achievement Awards, Boeing Company, Seattle, Washington
2011	Emerging Media Research Fellowship, Ball State University, Muncie, Indiana
2011	Global Health Institute Fellowship, Ball State University, Muncie, Indiana
2015	Big 12 Faculty Fellowship, The University of Texas at Austin, Austin, Texas
2014, 2015	Diversity Mentoring Fellowship, The University of Texas at Austin, Austin, Texas
2014, 2015	Fellow of Hampton K. and Margaret Frye Snell Endowed Chair in Transportation, The University of Texas at Austin, Austin, Texas

C. Contributions to Science

Food Access and Obesity

The NIH-funded Seattle Obesity Study investigated the relationship between Food Environment, Diet Quality and Obesity in City of Seattle. Dr. Jiao has worked as one of the leading GIS researchers for the project and developed different GIS measures to quantify people's access to healthy and unhealthy food in Seattle area. The study helped researchers understand the relationship between food access, fruit and vegetable intakes and obesity. Seattle Obesity Study has generated more than thirty journal articles. Based on Dr. Jiao's method, the researchers have published ten articles. Example publications are below.

1. **Jiao, J.** Drewnowski, A. Moudon, A.V. Aggarwal, A. Oppert, J.M. Charreire, H. and Chais, B. 2016. The impact of area residential property values on self-rated health: A cross-sectional comparative study of Seattle and Paris. *Preventive Medicine Reports*. 4,pp.68-74.
2. **Jiao, J.** Moudon, A.V. Kim, S. Hurvitz, P. and Drewnowski, A. 2015. Health Implications of Eating at Versus Living Near Fast Food or Quick Service Restaurants. *Nutrition and Diabetes*. 5(e171),pp.1-6.
3. Aggarwal, A., Cook, A., **Jiao, J.**, Seguin, R., Moudon, A.V., Hurvitz, P. and Drewnowski, A. 2014. Access to supermarkets and fruit and vegetable intake: Is it just a matter of physical proximity. *American Journal of Public Health*. 104 (5), pp. 917-923.
4. **Jiao, J.** Moudon, A.V. Ulmer, J. Hurvitz, P. and Drewnowski, A. 2012. How to identify food deserts: measuring physical and economic access to supermarkets in King County, WA. *American Journal of Public Health*, 102 (10), pp. e32-e39.

Built Environments and Food Shopping Behavior

Food shopping as one of the major daily activities has a direct impact on our urban transportation system. Dr. Jiao has investigated how urban built environments might affect people's grocery shopping behavior. The research showed that built environments around people's homes and primary grocery stores had a direct impact on their transportation mode choices, destination choices and grocery shopping frequency.

1. **Jiao, J.** Moudon, A.V. and Drewnowski, A. 2011. Grocery shopping: how individuals and built environments influence travel mode choice. *Transportation Research Record: Journal of the Transportation Research Board*, 2230, pp. 85-95.
2. Drewnowski, A. Moudon, A.V. **Jiao, J.** Aggarwal, A. Charreire, H. and Chaix, B. 2014. Food shopping behaviors and socioeconomic status (SES) influence obesity rates in Seattle and in Paris. *International Journal of Obesity*. 38(2), pp. 306-14.
3. **Jiao, J.** and Li, Y. 2012. The influence of built environments on grocery shopper's destination choice – a case study of Seattle. *IEEE Xplore*, 2012, pp.29-34.
4. **Jiao, J.** Moudon, A.V. and Drewnowski, A. (accepted). Does urban form influence grocery shopping frequency? A study from Seattle, Washington, USA. *International Journal of Retail & Distribution Management*.

Built Environment, GIS, and Physical Activity

Dr. Jiao has developed advanced GIS spatial analysis methods to precisely quantify and measure built environments at different scales. Based on these methods, Dr. Jiao and collaborators have measured the impact of built environments on people's walking and biking behaviors and found that both activities were heavily affected by the built environments in and around people's neighborhoods and along the walking and biking routes.

1. Griffin, G. and **Jiao, J.** 2015. Crowdsourcing Bicycle Volumes: Exploring the role of volunteered geographic information and established monitoring methods. *URISA Journal* 27(1), pp.57-66.
2. Griffin, G. and **Jiao, J.** 2015. Where does Bicycling for Health Happen? Analyzing Volunteered Geographic Information through Place and Plexus. *Journal of Transport & Health*. 2(2), pp.238-247.
3. Radil, S. and **Jiao, J.** 2016. Public Participatory GIS and the Geography of Inclusion. *The Professional Geographer*. 68(2), pp 202-210.
4. Li, Y. Liu, Y. and **Jiao, J.** 2013. A GIS-based Suitability Analysis of Xiamen's Green Space in Park for Earthquake Disaster Prevention and Refuge. *Urban Planning and Design Research*, 1(1), pp.1-8.

Public Transportation

Dr. Jiao and his collaborator has carried out deep research on measuring the demand and supply of public transit within the cities and understand the impact of public transit on housing and public safety.

1. **Jiao, J.** (accepted). Identifying Transit Deserts in Major Texas Cities: Where the Supplies Missed the Demands. *Journal of Transport and Land Use*.
2. Pang, H. and **Jiao, J.** 2015. Impacts of Beijing Bus Rapid Transit on Pre-owned Home Values. *Journal of Public Transportation*. 18(2), pp.34-44.
3. **Jiao, J.** and Dillivan, M. 2013. Transit deserts: the gap between demand and supply. *Journal of Public Transportation*. 16(3), pp.23-39.
4. Moudon, A.V. Lin, L. **Jiao, J.** Hurvitz, P. and Reeves, P. 2011. The risk of pedestrian injury and fatality in collisions with motor vehicles; a social ecological study of state routes and city streets in King County, Washington. *Accident Analysis & Prevention*, 43(1), pp. 11-24.

Complete List of Published Work in MyBibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/collections/bibliography/51266754/>

D. Research Support

Ongoing Research Support

Research Award (J. Jiao, PI)

09/01/16-08/31/17

UT Graduate Student Mentoring Fellowship, The University of Texas at Austin

Measuring Healthy Food Accessibility in Large Texas Cities

The PI will lead and mentor one graduate student to develop a method using GIS and different transportation mode to measure residents' accessibility to healthy food sources in Austin, Dallas, Houston, and San Antonio.

Role: Principal Investigator

Responsibilities: Direct the research design, data collection, and analysis process. Supervise and mentor one graduate student.

R01AG046460 (K. Fingerma, PI)

09/01/16-06/01/20

National Institute on Aging

Social Networks and Well-being in Late Life: A Study of Daily Mechanisms

This study examines adults over age 70 and their daily experiences. Participants first complete a survey about their global social network along with tests of cognitive and physical functioning. They then participate in a 5 day data collection involving experience sampling surveys 5 times a day, actigraphs, and electronically activated recorders (EAR).

Role: Consultant

Responsibilities: GIS Consultant on Built Environment Measurement and Quantification

Completed Research Support

Research Award (J. Jiao, PI)

09/01/15-08/31/16

Snell Endowment Grant, The University of Texas at Austin

Built Environment and Bicycle Checkouts in Public Bicycle Stations

This study will use GIS to measure the built environments around public bicycle stations in Austin, Dallas, Houston, and San Antonio and investigate its relationship to bicycle checkouts rate at each individual station. The goal is to help researchers and policy makers better manage the existing public bicycle stations and plan for future bicycle stations in the cities, which might increase people's overall physical activity level and reduce urban traffics.

Role: Principal Investigator

Responsibilities: Developed the research plan, supervised data collection and analysis, co-authored one research paper.

Research Award (J. Jiao, PI)

09/01/15-08/31/16

Green Fee Research Grant, The University of Texas at Austin

Understanding the Bicycle Usage and Bicycle Infrastructure at UT Austin campus

This study will use GPS, Smart phone apps, onsite observation, electric counter to collect bicycle volume and existing bicycle infrastructure usage at UT Austin Campus. The objective is to understand the relationship between existing infrastructure and their usages and promote more sustainable travel mode to and from UT Austin Campus.

Role: Principal Investigator

Responsibilities: Developed the research plan, led the research team finish the project.

Research Award (J. Jiao, PI)

09/01/15-08/31/16

UT Vice President for Research Grant, The University of Texas at Austin

Built Environments and Ridesharing in Austin, Texas

This study has used GPS and Smart phone apps to collect ridesharing data in Austin, Texas during the July 4th weekend and identified the request hot spots within the city. The researchers also used GIS to measure the built environment variable around these hot spots. The goal is understand how existing urban built environment might affect people's transportation mode choice during a special event.

Role: Principal Investigator

Responsibilities: Developed research plan, data collection, data analysis process, and supervised one graduate student through the research.

Research Award (J. Jiao, PI)

09/01/14-08/31/15

UT Vice President for Research Grant, The University of Texas at Austin

Identifying Food Deserts in Austin, Texas

This study developed a GIS based spatial analysis method to identify vulnerable population group and quantify their access to healthy and unhealthy food establishments in Austin, Texas.

Role: Principal Investigator

Responsibilities: Developed research and led the data collection and analysis.

Research Award (J. Jiao, PI)

09/01/14-08/31/15

Snell Endowment Grant, The University of Texas at Austin

Transit Deserts: The Gap between Demand and Supply in Austin, Dallas, Houston and San Antonio

This research developed a GIS based method to measure the neighborhoods' demand and supply of public transit in City of Austin, Dallas, Houston and San Antonio. The goal is to better allocate limited transit resource and provide better transit service to the most needed neighborhoods within the city.

Role: Principal Investigator

Responsibilities: Developed the research and led the GIS data analysis.

R01HL091881 (B. Saelens, PI)

08/01/09-07/31/14

National Heart, Lung, and Blood Institute

The Effect of Light Rail Transit on Physical Activity: A Natural Experiment

This study examined the impact of light rail and surrounding built environments on people's physical activity level before and after the Seattle Light Rail operation in Seattle, Washington. I designed the sampling section for the proposal and analyzed survey data after the first phase of data collection. Also measured samples'

accessibility to light rail stations through GIS, and modeled the impact of light rail on people's physical activity in nearby communities.

Role: Consultant

Responsibilities: GIS Consultant on built environment measurement and analysis