

CURRICULUM VITAE  
**GUANGQING CHI**  
August 10, 2018

Department of Agricultural Economics, Sociology, and Education  
The Pennsylvania State University  
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## EDUCATION

Ph.D., Environmental Demography, University of Wisconsin-Madison, 2006  
M.S., Environmental Policy, Michigan Technological University, 2002  
B.S., Environmental Science, East China Normal University, 1999

## POSITIONS AND AFFILIATIONS

### Pennsylvania State University (2015–)

Associate Professor of Rural Sociology and Demography, Department of Agricultural Economics, Sociology, and Education (2015–)  
Director, Computational and Spatial Analysis Core (previously the GIA Core and the DPS Core), Social Science Research Institute and Population Research Institute (2015–)  
Research Associate, Population Research Institute (2015–)  
Associate Professor of Public Health Sciences, School of Medicine (courtesy appointment; 2016–)  
Associate Professor of Sociology (courtesy appointment; 2016–)  
Graduate Faculty, Social Data Analytics (2016–)  
Graduate Faculty, Applied Demography (2016–)  
Graduate Faculty, International Agriculture and Development (2017–)  
Faculty Affiliate, Engineering Systems and Policy Program, the Thomas D. Larson Pennsylvania Transportation Institute (2015–)  
Associate, Institute for CyberScience (2017–)

Deputy Editor, *Demography* (2016–2019)

Editorial Board member, *Spatial Demography* (2012–)

### South Dakota State University (2014–2015)

State Demographer of South Dakota  
Associate Professor, Department of Sociology and Rural Studies  
Director, Rural Life and South Dakota Census Data Center  
Member, Federal-State Cooperative Program for Population Estimates, U.S. Bureau of the Census  
South Dakota Representative, 2020 Census Redistricting Data Program, U.S. Bureau of the Census  
Affiliated Researcher, the Networks, Economics, and Urban Systems (NEXUS) research group, Department of Civil Engineering, University of Minnesota (2010–2016)

### Mississippi State University (2006–2014)

Associate Professor (2013–2014) and Assistant Professor (2008–2013), Department of Sociology  
Research Scientist (2008–2014) and Postdoc Fellow (2006–2008), Social Science Research Center

## AWARDS AND HONORS

E. Walter Terrie Best Paper Award in Applied Demography (2017), Southern Demographic Association (with Donghui Wang)  
Faculty Research Award in Social and Behavioral Sciences (2013), College of Arts and Sciences, Mississippi State University  
2nd Place Award (2012), Transportation Workshop, Mississippi State University (with Jamie Boydston)  
Cherri M. Musser State Pride Faculty Award (2011), Mississippi State University  
Researcher of the Month (February 2011), College of Arts and Sciences, Mississippi State University  
William N. Clark State Pride Faculty Award (2010), Mississippi State University  
Research Fellow (2008), Social Science Research Center, Mississippi State University  
E. Walter Terrie Best Paper Award in Applied Demography (2007), Southern Demographic Association

## AREAS OF INTERESTS

Demography: environmental demography, spatial demography, applied demography, population change, migration, population estimation and forecasting, and left-behind children;  
Smart cities and resilient interdependent infrastructure systems: population-infrastructure dynamics, transportation and population change, neighborhood built environment and population health;  
Climate change: population-environment dynamics, natural resources and rural development, land use and population change, and community resilience and vulnerability;  
Quantitative methods: spatial statistics, spatial analysis and GIS, and Big Data

## RESEARCH GRANTS

PI = Principal Investigator; Co-PI = Co-Principal Investigator; Co-I = Co-Investigator; SP = Senior Personnel  
NSF = National Science Foundation; NIH = National Institutes of Health; NASA = National Aeronautics and Space Administration; USDOT = U.S. Department of Transportation; NHTSA = National Highway Traffic Safety Administration

### External Research Grants

1. **NSF** Sociology Program. "RR: The Generalizability and Replicability of Twitter Data for Population Research" (Award # 1823633). 7/15/2018–6/30/2021. **PI** with Heng Xu, Jennifer Van Hook, Eric Plutzer, and Junjun Yin. \$500,000.
2. **NSF** Innovations in Graduate Education Program. "IGE: Individualized Pathways and Resources to Adaptive Control Theory-Inspired Scientific Education (iPRACTISE)." 7/1/2018–6/30/2021. **SP** with Sy-Miin Chow (PI) and Nilam Ram. \$499,442.
3. **NSF** Office of Polar Program. "Convergence NNA: Coordinate a Transdisciplinary Research Network to Identify Challenges and Solutions of Permafrost Coastal Erosion and Its Socioecological Impact in the Arctic" (Award # 1745369). 1/1/2018–12/31/2021. **Co-PI** with Ming Xiao (PI), Kathleen Halvorsen, Benjamin Jones, and Vladimir Romanovsky. \$500,000.
4. **NIH**. "Population Research Institute" (Award # P2C HD041025). 9/4/2016–5/31/2021. **Co-I** (**PI** of the Computational and Spatial Analysis Core) with Jennifer Van Hook (PI) and Michelle Frisco. \$3,516,815.
5. **NSF** Critical Resilient Interdependent Infrastructure Systems and Processes Program. "CRISP Type 1/Collaborative Research: Population-Infrastructure Nexus: A Heterogeneous Flow-based Approach for Responding to Disruptions in Interdependent Infrastructure Systems" (Award # 1541136). 1/1/2016–12/31/2018. **PI** with Xiaopeng Li (PI at U South Florida) and Mengqi Hu. \$500,000.

6. **NASA** Land Use and Land Cover Change Program. "How Environmental Change in Central Asian Highlands Impacts High Elevation Communities" (Award # NNX15AP81G). 7/1/2015–6/30/2018 with an extension to 6/30/2019. **Co-I** with Geoffrey Henebry (PI) and Pavel Groisman. \$969,551.
7. **NIH**. "Play & Learning Across a Year (PLAY)." 4/1/2018–3/31/2023. Consultant with Karen E. Adolph, Catherine Tamis-Lemonda, and Rick Gilmore (PIs). \$8.5 million.
8. Pittsburgh Supercomputer Center. "The Generalizability and Replicability of Twitter Data for Population Research." 4/15/2018–4/16/2019. **PI**. Memory: 50,000 SUs; Storage: 30,000 GB.
9. Microsoft Azure for Research Program. "Data Science: Mining Twitter User Demographics as a First-Step in Big Data for Population Research with Microsoft Azure." 3/14/2018–12/31/2018. **PI**. \$10,000.
10. PA Tobacco Settlement Fund. "Neighborhood Effects on Health in Pennsylvania." 6/1/2016–12/31/2017. **Co-I** with Cynthia Chuang (PI). \$107,494.
11. **USDOT** National Center for Intermodal Transportation for Economic Competitiveness. "The Economic Demography of Passenger Intermodal Transportation: Opportunities and Challenges" (Award # DTRT12GUTC14-201307). 07/1/2013–12/31/2015. **PI**. \$199,858.
12. **USDOT** National Center for Intermodal Transportation for Economic Competitiveness. "Economic and Demographic Impacts of Passenger Rail Systems: A Scenario Analysis of Restoring the Passenger Rail Corridor between New Orleans and Orlando" (Award # DTRT12GUTC14-201308). 05/15/2013–12/31/2015. **PI**. \$201,226.
13. South Dakota Rapid City School District. "School Enrollment Projections." 11/1/2014–2/28/2015. **PI**. \$11,500. [Contract]
14. **NHTSA**, Mississippi Highway Patrol, and Mississippi Department of Public Safety. "Mississippi Highway Patrol Data and Analysis Program: Year Six" (Award # 14-MC-401-1). 10/01/2013–09/30/2014. **Co-PI** with Tonya Thornton-Neaves (PI). \$238,811.
15. **USDOT** National Center for Intermodal Transportation for Economic Competitiveness. "Passenger Usages of the Intermodal Transportation System: An Analysis of the 2009 National Household Travel Survey Data" (Award # DTRT12GUTC14-12050543). 07/01/2012–08/15/2013. **PI**. \$65,459.
16. **USDOT** University Transportation Center Program. "National Center for Intermodal Transportation and Economic Competitiveness." 2012–2014. Faculty Affiliate with Burak Eksioglu (PI). \$3,500,000.
17. **NHTSA**, Mississippi Highway Patrol, and Mississippi Department of Public Safety. "Mississippi Highway Patrol Data and Analysis Program: Year Five" (Award # 13-K9-401-1). 10/01/2012–09/30/2013. **Co-PI** with Tonya Thornton-Neaves (PI). \$194,557.
18. **NHTSA**, Mississippi Highway Patrol, and Mississippi Department of Public Safety. "Mississippi Highway Patrol Data and Analysis Program: Year Four" (Award # 12-K9-401-1). 10/01/2011–09/30/2012. Research Scientist with Arthur G. Cosby (PI). \$270,466.
19. **NHTSA**, Mississippi Highway Patrol, and Mississippi Department of Public Safety. "Mississippi Highway Patrol Data and Analysis Program: Year Three" (Award # 11-K9-401-1). 10/01/2010–09/30/2011. Research Scientist with Arthur G. Cosby (PI). \$277,225.
20. **USDOT** National Center for Intermodal Transportation. "Assessing Economic and Demographic Impacts of Intermodal Transportation Systems" (Award # 363010100-07070609). 08/16/2009–08/15/2010. **PI**. \$44,112.
21. **NHTSA**, Mississippi Highway Patrol, and Mississippi Department of Public Safety. "Mississippi Highway Patrol Data and Analysis Program: Year Two" (Award # 10-K9-401-1). 10/01/2009–09/30/2010. Research Scientist with Arthur G. Cosby (PI). \$392,160.
22. **USDOT** National Center for Intermodal Transportation. "Modeling Economic Benefits of Resilience Enhancement Strategies for Intermodal Transportation Systems." (Award # 363010100-009067-018). 07/01/2009–06/30/2010. **Co-PI** with Li Zhang (PI) and Mingzhou Jin. \$57,519.

23. **NHTSA**, Mississippi Highway Patrol, and Mississippi Department of Public Safety. "Mississippi Highway Patrol Data and Analysis Program: Year One" (Award # 09-K9-401-1). 10/01/2008–09/30/2009. Research Scientist with Arthur G. Cosby (PI). \$516,632.

#### **Internal Research Grants**

24. PSU Social Science Research Institute. "An Innovative Approach to Tackle the Opioid Epidemic: Utilizing Twitter Data and Integrating Big Data Analytics and Spatial and Social Network Analyses." 5/1/2018–6/30/2019. Co-PI with Zhen Lei (PI), Glenn Sterner, Ashton Verdery, Junjun Yin, and Cynthia Chuang. \$20,000.
25. Penn State's 2016-2020 Strategic Plan. "Individualized Pathways and Resources to Adaptive Control Theory-Inspired Scientific Education (iPRACTISE)." 7/1/2018–6/30/2020. Co-I with Sy-Miin Chow (PI) and Nilam Ram. \$250,000.
26. PSU Human Health and Environment. "Heavy Metal Exposures and Aggressive Prostate Cancer." 7/1/2018–6/30/2020. Co-I with Alicia C. McDonald and Ming Wang (PIs). \$50,000.
27. PSU Institute for CyberScience. "The Generalizability and Replicability of Twitter Data for Population Research." 5/1/2018–6/30/2019. PI with Heng Xu, Jennifer Van Hook, Eric Plutzer, and Junjun Yin. \$35,000.
28. PSU Social Science Research Institute and Institutes of Energy and the Environment. "From Environmental Change to Left-behind Children's Well-being in Rural Highlands: The Nexus of Pasture Productivity, Family Processes, Labor Migrants, and Child Development." 7/1/2017–6/30/2019. PI with Mark Feinberg, Jennifer Glick, Erica Smithwick, and Scott Yabiku. \$50,000.
29. Penn State's 2016-2020 Strategic Plan. "Integrated Data Systems Solutions for Health Equity." 7/1/2017–6/30/2019. Co-I with Susan McHale (PI). \$180,000.
30. Penn State's 2016-2020 Strategic Plan. "Digital Collaboratory for Precision Health Research." 7/1/2017–6/30/2019. Co-I with Vasant Honavar (PI). \$250,000.
31. PSU Human Health and Environment. "Predictive Modeling of Health Risks and Outcomes from Clinical, Environmental, Contextual, Behavioral Data: A Proof-of-Concept Study Focused on Breast Cancer in Central Pennsylvania." 6/1/2017–5/31/2018. Co-PI with Vasant Honavar and Eugene Lengerich (PIs). \$50,000.
32. PSU Institutes of Energy and the Environment. "Ecological Migration in a Large-Scale Quasi-Experiment Design in China: Implications of Climate Change, Landscape Structure, Ecosystem Services and Government Intervention." 4/1/2017–6/30/2018. PI with Zhen Lei, Erica Smithwick, Brian Thiede, Junjun Yin, Jiquan Chen, and Huanguang Qiu. \$25,000.
33. PSU Pathway to Partnership Stage I. "Aggressive Prostate Cancer in Pennsylvania: Health Disparities and Environmental Risk Factors." 8/1/2016–2/1/2017. Co-I with Ming Wang and Alicia C. McDonald (Co-PIs). \$5,000.
34. PSU Social Science Research Institute. "The Computational and Spatial Analysis Core's Twitter Initiative as Part of Social Science Research Institute's Strategic Area in Innovative Methods." 6/1/2016–6/1/2019. PI. \$83,585.
35. PSU Social Science Research Institute and Institutes of Energy and the Environment. "A Household-level Longitudinal Investigation into the Food Environment's Impact on Food Behavior and Health." 7/1/2015–6/30/2016. Co-I with Jennifer Van Hook (PI), Justine Blanford, Edward Jaenicke, and Douglas Wrenn. \$20,000.
36. PSU Pathway to Partnership Stage I. "Population Health Research in the Era of Big Data." 6/1/2015–11/1/2015. Co-PI with Cynthia Chuang (co-PI). \$5,000.
37. MSU Office of Research and Economic Development. "Big Data Analysis in Transportation and Sociology." 8/16/2013–8/15/2014. Co-PI with Xiaopeng Li (PI). \$2,000.

38. MSU Office of Research and Economic Development. "Infrastructure and Livable Community." 8/16/2012–8/15/2013. Co-PI with Xiaopeng Li (PI). \$2,000.
39. MSU College of Arts and Sciences, Henry Family Research Fund. "Social and Spatial Implications of Gasoline Price Changes on Commuting Behaviors." 06/01/2011–05/31/2012. PI. \$5,000.

## PUBLICATIONS

\* designates student authors under my direct supervision when developing the article

### Book

1. **Chi, Guangqing** and Jun Zhu. *Spatial Regression Models for the Social Sciences*. SAGE Publications: Thousand Oaks, CA. (under contract)

### Commissioned White Paper

2. **Chi, Guangqing**. 2017. *Demographic Forecasting and Future Interstate Highway System Demands*. The National Academy of Sciences, Washington, D.C. [commissioned and invited white paper for the Future Interstate Study Committee of the Transportation Research Board in response to a Congressional request for the Fixing America's Surface Transportation Act of 2015]

### Peer-Reviewed Journal Articles

3. **Chi, Guangqing**, Derrick Shapley\*, Tse-Chuan Yang, and Donghui Wang\*. Accepted. "Lost in the Black Belt South: Health Outcomes and Transportation Infrastructure." *Environmental Monitoring and Assessment*.
4. Kasu, Bishal\* and **Guangqing Chi**. Accepted. "Intercity Passenger Rails: Facilitating the Spatial Spillover Effects of Population and Employment Growth in the United States, 2000–2010." *Journal of Urban Planning and Development*.
5. Kasu, Bishal\* and **Guangqing Chi**. Accepted. "Transportation Infrastructures and Socioeconomic Statuses: A Spatial Regression Analysis at the County Level in the Continental United States, 1970–2010." *Spatial Demography*.
6. **Chi, Guangqing** and Donghui Wang\*. 2018. "Population Projection Accuracy: The Impacts of Sociodemographics, Accessibility, Land Use, and Neighbor Characteristics." *Population, Space and Place* 24(5): xx–xx.  
**Winner** of the 2017 E. Walter Terrie Best Paper Award in Applied Demography, Southern Demographic Association.
7. Li, Chuo, **Guangqing Chi**, and Robert Jackson. 2018. "Neighborhood Built Environment and Walking Behaviors: Evidence from the Rural American South." *Indoor and Built Environment* 27(7): 938–952.
8. Li, Chuo, Amir Ghiasi, Xiaopeng Li, and **Guangqing Chi**. 2018. "Sociodemographics and Access to Organic and Local Food: A Case Study of New Orleans, Louisiana." *Cities: The International Journal of Urban Policy and Planning*. 79: 141–150.
9. **Chi, Guangqing** and Hung Chak Ho. 2018. "Population Stress: A Spatiotemporal Analysis of Population Change and Land Development at the County Level in the Continental United States, 2000–2010." *Land Use Policy* 70(1): 128–137.
10. Li, Kun\*, **Guangqing Chi**, Ling Wang, Yujing Xie, Xiangrong Wang, and Zhengqiu Fan. 2018. "Identifying the Critical Riparian Buffer Zone with the Strongest Linkage between Landscape Characteristics and Surface Water Quality." *Ecological Indicators* 93: 741–752.
11. Ho, Hung Chak, Anders Knudby, **Guangqing Chi**, Mehdi Aminipouri, and Derrick Yuk-Fo Lai. 2018. "Spatiotemporal Analysis of Regional Socio-Economic Vulnerability Change Associated with Heat Risks in Canada." *Applied Geography* 95(1): 61–70.
12. Chen, Xinxiang, Guanghua Chi, and **Guangqing Chi**. 2018. "Do Airports Boost Economic Development by Attracting Talent? An Empirical Investigation at the Sub-County Level." *Social Science Quarterly* 99(1): 313–329.

13. **Chi, Guangqing** and Jamie Boydston\*. 2017. "Are Gasoline Prices a Factor in Residential Relocation Decisions? Preliminary Findings from the American Housing Survey, 1996–2008." *Journal of Planning Education and Research* 37(3): 334–346.
14. Wang, Donghui\* and **Guangqing Chi**. 2017. "Different Places, Different Stories: A Study of Spatial Heterogeneity of County-Level Fertility in China." *Demographic Research* 37: 493–526.
15. Pinto, Casey, Lorah D. Dorn, Vernon M. Chinchilli, Ping Du, and **Guangqing Chi**. 2017. "Rural Counties Chlamydia and Gonorrhea Rates in Pennsylvania Among Adolescents and Young Adults." *Annals of Epidemiology* 27(9): 606–610.
16. **Chi, Guangqing**, Willie Brown, Xiang Zhang, and Yanbing Zheng. 2015. "Safer Roads Owing to Higher Gasoline Prices: How Long It Takes." *American Journal of Public Health* 105(8): 119–125.  
 Interviewed by *National Public Radio, Huffington Post, The Weather Channel, South Dakota Public Broadcasting, VOAnews, KSFY ABC, Fox 5 News New York, Money*, and many other news media.
17. Clement, Matthew, **Guangqing Chi**, and Derrick Ho. 2015. "Urbanization and Land Use Change: A Human Ecology of Deforestation Across the United States, 2001–2006." *Sociological Inquiry* 85(4): 628–653.
18. Li, Chuo, **Guangqing Chi**, and Robert Jackson. 2015. "Perceptions and Barriers to Walking in the Rural American South: The Influence of the Neighborhood Built Environment on Pedestrian Behaviors." *Urban Design International* 20(4): 255–273.
19. **Chi, Guangqing** and David W. Marcouiller. 2013. "In-Migration to Remote Rural Regions: The Relative Impacts of Natural Amenities and Land Developability." *Landscape and Urban Planning* 117(1): 22–31.
20. **Chi, Guangqing**, Jeremy R. Porter, Arthur G. Cosby, and David Levinson. 2013. "The Impact of Gasoline Price Changes on Traffic Safety: A Time Geography Explanation." *Journal of Transport Geography* 28(1): 1–11.
21. **Chi, Guangqing** and Yanbing Zheng. 2013. "Estimating Transport Footprint along Highways at Local Levels: A Combination of Network Analysis and Kriging Methods." *International Journal of Sustainable Transportation* 7(3): 261–273.
22. **Chi, Guangqing** and David W. Marcouiller. 2013. "Natural Amenities and Their Effects on Migration along the Urban–Rural Continuum." *The Annals of Regional Science* 50(3): 861–883.
23. **Chi, Guangqing**, Mohammed A. Quddus, Arthur Huang\*, and David Levinson. 2013. "Gasoline Prices Effects on Traffic Safety in Urban and Rural Areas: Evidence from Minnesota, 1998–2007." *Safety Science* 59(1): 154–162.
24. Robertson, Angela A., Sheena Gardner, Xiaohe Xu, **Guangqing Chi**, and D. Lee McCluskey. 2013. "Mississippi's DUI Offender Intervention: 40 Years of Programming and Research." *Journal of Offender Rehabilitation* 52(2): 138–155.
25. **Chi, Guangqing**. 2012. "The Impacts of Transport Accessibility on Population Change across Rural, Suburban, and Urban Areas: A Case Study of Wisconsin at Subcounty Levels." *Urban Studies* 49(12): 2711–2731.
26. Chen, Xinxiang and **Guangqing Chi**. 2012. "Natural Beauty, Money, and Talent Distribution: A Local-Level Panel Data Analysis." *Population Research and Policy Review* 31(5): 665–681.
27. **Chi, Guangqing** and David W. Marcouiller. 2012. "Recreational Homes and Migration to Remote Amenity-Rich Areas." *Journal of Regional Analysis and Policy* 42(1): 47–60.  
 Invited Presidential Symposium for the 2011 annual meeting of the Mid-Continent Regional Science Association.
28. **Chi, Guangqing**, Timothy E. McClure\*, and David B. Brown. 2012. "Gasoline Prices and Traffic Crashes in Alabama, 1999–2009." *Traffic Injury Prevention* 13(5): 476–484.
29. **Chi, Guangqing** and Paul R. Voss. 2011. "Small-Area Population Forecasting: Borrowing Strength across Space and Time." *Population, Space and Place* 17(5): 505–520.
30. **Chi, Guangqing** and David W. Marcouiller. 2011. "Isolating the Effect of Natural Amenities on Population Change at the Local Level." *Regional Studies* 45(4): 491–505.

31. **Chi, Guangqing**, Xuan Zhou\*, and Paul R. Voss. 2011. "Small-Area Population Forecasting in an Urban Setting: A Spatial Regression Approach." *Journal of Population Research* 28(2): 185–201.
32. **Chi, Guangqing**, Xuan Zhou\*, Timothy E. McClure\*, Paul A. Gilbert\*, Arthur G. Cosby, Li Zhang, Angela A. Robertson, and David Levinson. 2011. "Gasoline Prices and Their Relationship to Drunk-Driving Crashes." *Accident Analysis and Prevention* 43(1): 194–203.
33. **Chi, Guangqing** and Stephen J. Ventura. 2011. "An Integrated Framework of Population Change: Influential Factors, Spatial Dynamics, and Temporal Variation." *Growth and Change* 42(4): 549–570.
34. **Chi, Guangqing** and Domenico Parisi. 2011. "Highway Expansion Effects on Urban Racial Redistribution in the Post-Civil Rights Period." *Public Works Management and Policy* 16(1): 40–58.
35. Misra, Kaustav\* and **Guangqing Chi**. 2011. "Measuring Public School Competition from Private Schools: A Gravity-Based Index." *Journal of Geographic Information System* 3(4): 306–311.
36. **Chi, Guangqing** and Stephen J. Ventura. 2011. "Population Change and Its Driving Factors in Rural, Suburban, and Urban Areas of Wisconsin, USA, 1970–2000." *International Journal of Population Research* 2011: 1–14.
37. **Chi, Guangqing**. 2010. "The Impacts of Highway Expansion on Population Change: An Integrated Spatial Approach." *Rural Sociology* 75(1): 58–89.
38. **Chi, Guangqing**. 2010. "Land Developability: Developing an Index of Land Use and Development for Population Research." *Journal of Maps* 2010: 609–617.
39. **Chi, Guangqing**, Arthur G. Cosby, Mohammed A. Quddus, Paul A. Gilbert\*, and David Levinson. 2010. "Gasoline Prices and Traffic Safety in Mississippi." *Journal of Safety Research* 41(6): 493–500.
40. **Chi, Guangqing**. 2009. "Can Knowledge Improve Population Forecasts at Subcounty Levels?" *Demography* 46(2): 405–427.  
 Winner of the 2007 E. Walter Terrie Best Paper Award in Applied Demography, Southern Demographic Association.
41. **Chi, Guangqing** and David W. Marcouiller. 2009. "Rethinking the Migration Effects of Natural Amenities: Part I." *Canadian Journal of Regional Science* 32(3): 331–348.
42. **Chi, Guangqing** and David W. Marcouiller. 2009. "Rethinking the Migration Effects of Natural Amenities: Part II." *Canadian Journal of Regional Science* 32(3): 349–360.
43. **Chi, Guangqing** and Jun Zhu. 2008. "Spatial Regression Models for Demographic Analysis." *Population Research and Policy Review* 27(1): 17–42.  
 Reprinted in Salvatore Babones (Ed.) 2013. *Applied Statistical Modeling*. SAGE Publications. ISBN: 978-1-4462-0839-7.
44. Voss, Paul R. and **Guangqing Chi**. 2006. "Highways and Population Change." *Rural Sociology* 71(1): 33–58.
45. **Chi, Guangqing**, Paul R. Voss, and Steven C. Deller. 2006. "Rethinking Highway Effects on Population Change." *Public Works Management and Policy* 11(1): 18–32.
46. **Chi, Guangqing** and Paul R. Voss. 2005. "Migration Decision-Making: A Hierarchical Regression Approach." *Journal of Regional Analysis and Policy* 35(2): 11–22.
47. **Chi, Guangqing** and Brian Stone, Jr. 2005. "Sustainable Transport Planning: Estimating the Ecological Footprint of Vehicle Travel in Future Years." *Journal of Urban Planning and Development* 131(3): 170–180.

### Book Chapters

48. Kasu, Bishal\*, Ernesto Castañeda, and **Guangqing Chi**. 2018. "Remittance-driven Migration in spite of Microfinance? The Case of Nepalese Households." In: *Immigration and Categorical Inequality: Migration to the City and the Birth of Race and Ethnicity*, pp. 171–196, edited by Ernesto Castañeda. New York: Routledge.
49. **Chi, Guangqing** and Donghui Wang\*. 2017. "Small-Area Population Forecasting: A Geographically Weighted Regression Approach." In: *The Frontiers of Applied Demography*, pp. 449–471, edited by David Swanson. New York: Springer.

50. Parisi, Domenico, Steven M. Grice, **Guangqing Chi**, and Jed Pressgrove. 2011. "Poverty, Work, and the Local Environment: TANF and EITC." In: *Economic Restructuring and Family Well-Being in Rural America*, pp. 320–335, edited by Ann Tickamyer and Kristin Smith. University Park, PA: Pennsylvania State University Press.

### **Encyclopedia Entries**

51. Chi, Guangqing. 2014. "Social and Economic Impacts of Highways." In: *Encyclopedia of Transportation: Social Science and Policy*, pp. 756–759, edited by Mark Garrett and J. Geoffrey Golson. Thousand Oaks, CA: SAGE Publications. DOI: 10.4135/9781483346526.n269.
52. Chi, Guangqing. 2014. "Economic Development." In: *Encyclopedia of Transportation: Social Science and Policy*, pp. 454–457, edited by Mark Garrett and J. Geoffrey Golson. Thousand Oaks, CA: SAGE Publications. DOI: 10.4135/9781483346526.n172.
53. Chi, Guangqing. 2007. "Highway Effects on Economic and Population Growth: Regional Economic Explanation." In: *Encyclopedia of Earth*, edited by Cutler J. Cleveland. Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment.

### **Refereed Conference Proceedings**

54. Wang, Donghui\*, Annelise D. Hagedorn\*, Guangqing Chi, Guljamal Ibraimova, Kamilya Kelgenbaeva, and Geoffrey M. Henebry. 2016. "Agricultural Productions in Kyrgyzstan, 1990–2014." *The International University of Kyrgyzstan Journal* 29(1): 11–16.
55. Li, Chuo, Amir Ghiasi, Xiaopeng Li, and Guangqing Chi. 2016. "Socio-demographic Characteristics Associated with Access to Organic and Local Food." #16–2058. The annual meeting of the Transportation Research Board, January 10–14, 2016, Washington, D.C.
56. Chi, Guangqing and Jamie Boydston\*. 2013. "Rising Gasoline Prices and Residential Relocation Closer to Workplaces." #13–1686. The annual meeting of the Transportation Research Board, January 13–17, 2013, Washington, D.C.
57. Chi, Guangqing, Jeremy R. Porter, Arthur G. Cosby, and David Levinson. 2013. "Understanding the Impact of Gasoline Price Changes on Traffic Safety: A Time Geography Approach." #13–1687. The annual meeting of the Transportation Research Board, January 13–17, 2013, Washington, D.C.
58. Chi, Guangqing, Mohammed A. Quddus, Arthur Huang\*, and David Levinson. 2013. "Urban-Rural Difference of Gasoline Price Effects on Traffic Safety." #13–1688. The annual meeting of the Transportation Research Board, January 13–17, 2013, Washington, D.C.
59. Chi, Guangqing and Yanbing Zheng. 2012. "Estimating Transport Footprint along Highways at Local Levels: Combination of Network Analysis and Kriging Methods." #12–0754. The annual meeting of the Transportation Research Board, January 22–26, 2012, Washington, D.C.
60. Chi, Guangqing. 2010. "Land Developability and Population Dynamics: Developing an Index of Land Use and Development for Sustainability Research." #3D7–ICSU10387. The First International Conference on Sustainable Urbanization, December 15–17, 2010, Hong Kong.
61. Chi, Guangqing. 2010. "Estimating Transport Ecological Footprint at Local Levels: An Ordinary Kriging Approach." #8A02–ICSU10386. The First International Conference on Sustainable Urbanization, December 15–17, 2010, Hong Kong.

### **Data Products**

62. Chi, Guangqing and Derrick Ho\*. 2014. "Land Developability in 2011 at the Census Tract Level in the Continental U.S." Released on September 18, 2014.
63. Chi, Guangqing and Derrick Ho\*. 2013. "Land Developability: A Measure of the Proportion of Lands Available for Development and Conversion." Available at <http://www.landdevelopability.org>. Released on April 15, 2013.



## Book Review

64. Chi, Guangqing. 2013. "Applied Spatial Data Analysis with R" by Roger S. Bivand, Edzer J. Pebesma, and Virgilio Gómez-Rubio (New York, NY: Springer. 374 + xiv. ISBN: 978-0-387-78170-9). *Spatial Demography* 1(2): 227–228.

## Other Publications

65. Chi, Guangqing, Bishal Kasu\*, and Annelise D. Hagedorn\*. 2016. "The Economic Demography of Passenger Intermodal Transportation: Opportunities and Challenges." Project Report No. 13-007. National Center for Intermodal Transportation for Economic Competitiveness, U.S. Department of Transportation. <https://trid.trb.org/view.aspx?id=1400760>.
66. Chi, Guangqing and Bishal Kasu\*. 2016. "Economic and Demographic Impacts of Passenger Rail Systems: The Impact of Intercity Passenger Rails on Population and Employment Change in the United States, 2000–2010." Project Report No. 13-008. National Center for Intermodal Transportation for Economic Competitiveness, U.S. Department of Transportation. <https://trid.trb.org/view.aspx?id=1400761>.
67. Chi, Guangqing and Mary Killsahundred\*. 2015. "Rapid City School District School-Level Enrollment Projections 2015–2024." Project Report. The Black Hills Knowledge Network, Rapid City, SD.
68. Chi, Guangqing. 2014. "South Dakota State Data Center Newsletter, Winter 2014 Issue." Rural Life and State Data Center, Department of Sociology and Rural Studies, South Dakota State University.
69. Chi, Guangqing. 2014. "South Dakota State Data Center Newsletter, Fall 2014 Issue." Rural Life and State Data Center, Department of Sociology and Rural Studies, South Dakota State University.
70. Chi, Guangqing. 2014. "Traffic Fatalities Have Been Declining Steadily Since 2005: Why?" In: *Mississippi Traffic Safety Data Book 2014*, pp. 13–16, edited by McKee, C., Burns, M.A., Farrell, B., Neaves, T., Falls, A., Singletary, K., Nguyen, J., & Ginn, A. Starkville, MS: Social Science Research Center, Mississippi State University.
71. Chi, Guangqing and Willie Brown. 2014. "Rising Gasoline Prices Lead to the Reduction in Drunk-Driving Crashes." Policy Brief. Public Safety Data Laboratory, Social Science Research Center, Mississippi State University. <http://psdl.ssrc.msstate.edu/wp/wp-content/uploads/GasolinePricesandDrunk-DrivingCrashes.pdf>.
72. Chi, Guangqing and Jamie Boydston\*. 2013. "Passenger Usages of the Intermodal Transportation System: An Analysis of the 2009 National Household Travel Survey Data." Project Report. National Center for Intermodal Transportation for Economic Competitiveness, U.S. Department of Transportation.
73. Chi, Guangqing and Jamie Boydston\*. 2012. "Passenger Responses to Gasoline Price Increases: Residential Relocation and Intermodal Transportation." Project Report. Henry Family Research Fund, College of Arts and Sciences, Mississippi State University.
74. Chi, Guangqing. 2010. "Assessing Economic and Demographic Impacts of Intermodal Transportation Systems." Project Report. National Center for Intermodal Transportation, U.S. Department of Transportation.
75. Mo, Xiugen, Guangqing Chi, and Charles A. Campbell. 2009. "The Temporal and Spatial Effect of Highways on China's Economic Growth." Working Paper. Social Science Research Network. Available at SSRN: <http://ssrn.com/abstract=1580246>.
76. Voss, Paul R. and Guangqing Chi. 2004. "On the Causality between Highway Expansion and Population Change: A Spatial Multivariate Regression Analysis." *Applied Demography* 17(2): 5–6.
77. Chi, Guangqing. 1999. "Identifying and Weighing Environmental Factors in Communities." *Shanghai Property Management* 24: 24–25. (in Chinese)
78. Chi, Guangqing. 1999. "Applying the ISO14001 Environmental Management System to Manage

- Communities: A Case Study of Ching Chu Garden, Shanghai." *Shanghai Property Management* 24:18–20. (in Chinese)
79. Wang, Xiangrong and Guangqing Chi. 1999. "Implementing the ISO14001 Environmental Management System to Improve the Ecological Construction of Urban Communities." *Shanghai Property Management* 24:10–13, 17. (in Chinese)

## PRESENTATIONS

\*designates co-author presented

### Invited Presentations

- 2018: University of Illinois, Mountain Futures Conference\*, Lanzhou University, Pennsylvania State University, East China Normal University
- 2017: NSF/NASA workshop at Ulaanbaatar, Fudan University, Shanghai University, International University of Kyrgyzstan, Lanzhou University
- 2016: Pennsylvania State University, Renmin University of China, Peking University, Ocean University of China, Nanjing University, East China Normal University, Rural Sociological Society, University of Central Asia, Pennsylvania State School of Medicine, Temple University
- 2015: National Science Foundation, Pennsylvania State University, Rotary Club of Watertown (SD)
- 2014: South Dakota State University, Pennsylvania State University, University of Toronto, University of Texas at El Paso
- 2013: Mississippi State University, University of Tennessee-Knoxville
- 2012: University of Utah
- 2011: Mid-Continent Regional Science Association\*
- 2009: Mississippi State University
- 2007: Michigan State University
- 2006: State University of New York at Buffalo, Mississippi State University, University of Wisconsin-Madison
- 2005: University of Wisconsin-Madison
- 2004: University of Illinois-Chicago

### Conference Presentations

- 2018: Population Association of America, Computational Social Science\*, Rural Sociology Society\*, Agriculture, Food, and Human Values\*, Conference on the Use of Secondary and Open Source Data in Developmental Science\*, EUCOP5\*, Global Health & Innovation Conference\*
- 2017: International Union for the Scientific Study of Population, Southern Demographic Association\*, Central Eurasian Studies Society, Rural Sociology Society\*, Population Association of America, Society for Applied Anthropology\*
- 2016: Global Land Programme Open Science, World Congress of Rural Sociology, Rural Sociology Society, International Symposium on Society and Resource Management, International Scientific-Practical Conference on Challenges in Adaptation of Central Asian Mountain Regions to Global Changes, Population Association of America, Transportation Research Board\*
- 2015: Rural Sociology Society, International Conference on Population Geographies, SDITE\*
- 2014: Population Association of America\*, Association of American Geographers, INFORMS\*
- 2013: National Center for Intermodal Transportation for Economic Competitiveness conference, Southern Demographic Association\*, Population Association of America, University Transportation Centers Conference for the Southeastern Region, Council of Educators in Landscape Architecture\*, Transportation Research Board

- 2012: Population Association of America, Alabama-Mississippi Sociological Association\*, Transportation Research Board, Applied Demography Conference\*, Regional Science Association International
- 2011: Population Association of America, Global Congress on Minimally Invasive Gynecology\*, Transportation Research Board
- 2010: International Conference on Sustainable Urbanization, Southern Demographic Association, American Sociological Association
- 2009: Regional Science Association International, Southern Demographic Association, Rural Sociology Society, Western Economics Association International\*
- 2008: Southern Demographic Association, Rural Sociological Society, Population Association of America, Alabama-Mississippi Sociological Association
- 2007: Southern Demographic Association, Population Association of America, Association of American Geographers
- 2006: British Society for Population Studies\*, Population Association of America, Association of American Geographers
- 2005: Regional Science Association International, University Consortium for Geographic Information Science Summer Assembly, Population Association of America
- 2004: Southern Demographic Association\*, Mid-Continent Regional Science Association, Population Association of America

### **TEACHING AND SUPERVISING**

PSU = Pennsylvania State University; SDSU = South Dakota State University; MSU = Mississippi State University

#### **Courses Taught at PSU**

RSOC 597 Elements of Social Statistics. Spring 2018.  
 CED 410 Population and Environment. Spring 2017.  
 RSOC 597 Spatial Analysis of Social Data. Spring 2016.

#### **Courses Taught at MSU**

SO4703/6703 Population Problems. Fall 2012; Fall 2013.  
 SO4990/6990 Transportation and Society. Spring 2012; Spring 2013.  
 SO8243 Spatial Analysis of Social Data. Fall 2008; Summer 2011; Spring 2014.  
 SO8274 Graduate Social Statistics I. Spring 2009; Spring 2010; Spring 2011.  
 SO8284 Graduate Social Statistics II. Fall 2009; Fall 2010; Fall 2011.

#### **Ph.D. and M.S. Advisees**

Christian Scott, Rural Sociology and International Agriculture and Development, PSU, PhD in progress  
 Shuai Zhou, Rural Sociology and Demography, PSU, MS in progress  
 Xiaoran Sun, Social Data Analytics, PSU (research rotation advisee)  
 Donghui Wang, Rural Sociology and Demography, PSU, PhD 2018 (co-advised with Leif Jensen)  
 Bridget Ward, Geographic Information Systems, PSU, MS 2017 (GIS Analyst, HDR, Inc.)  
 Bishal Kasu, Sociology and Rural Studies, SDSU, PhD 2017 (Postdoc, South Dakota State U)  
 Derrick Shapley, Sociology, MSU, PhD 2015 (Assistant Professor, Troy U)

#### **Faculty Mentees**

Casey Pinto, Assistant Professor of Public Health Sciences, PSU  
 Heng Xu, Associate Professor of Information Sciences and Technology, PSU (SSRI Faculty Fellow)

### **Ph.D. Dissertation and M.S. Thesis Committees**

Xuetao Huang (Agricultural, Environmental, and Regional Economics and Demography, PSU, PhD in progress); Wei-Lin Wang (Rural Sociology and Demography, PSU, PhD in progress); Richard Bankoff (Bioethics and Anthropology, PSU, PhD in progress); Qiong Zhu (Higher Education, PhD in progress); Abou Traore (Rural Sociology, PSU, PhD 2018); Bo Bian (Economics, PSU, PhD 2018); Yunmei Lu (Sociology, PSU, PhD 2018); Mohsen Parsafard (Civil and Environmental Engineering, U South Florida, PhD 2017); Chia-Yueh Hus (Social Work and Social Administration, U of Hong Kong, PhD 2017); Andrew Gladfelter (Criminology, PSU, PhD 2016); Danya Kim (Urban and Regional Planning, U of Wisconsin-Madison, PhD 2016); Jamie Boydstun (Sociology, MSU, PhD 2014); Onyumbwe E. Lukongo (Finance and Economics, MSU, PhD 2014); Li Zheng (Sociology, MSU, PhD 2013); Philip Mason (Sociology, MSU, PhD 2012); Kaustav Misra (Finance and Economics, MSU, PhD 2010); John S. McCown (Sociology, MSU, MS 2011); Jamie Boydstun (Sociology, MSU, MS 2009)

### **Assistants Funded and/or Supervised**

RA = Research Associate; GRA = Graduate Research Assistant; GTA = Graduate Teaching Assistant; URA = Undergraduate Research Assistant

Christian Scott (PSU GRA 2016–); Shuai Zhou (PSU GRA 2017–); Donghui Wang (PSU GRA 2015–2018); Wei-Lin Wang (PSU GRA 2016–2017); Annelise D. Hagedorn (PSU GRA 2015–2017); Xuetao Huang (PSU GRA 2015–2016); Bishal Kasu (SDSU GRA 2014–2015); Mary Kill-A-Hundred (SDSU GRA 2014–2015); Susan Yerhot (SDSU GRA 2014–2015); Jamie Boydstun (MSU GRA 2011–2013); Willie Brown (MSU RA 2013–2014); Paul Gilbert (MSU GRA 2008–2010); Taylor Hackemack (MSU URA 2011–2014); Derrick Ho (MSU GRA 2012); Bishal Kasu (MSU GRA 2013–2014); Tim McClure (MSU GRA 2011–2012); John McCown (MSU GTA 2009–2011); Xiaojin Song (MSU GTA 2012); Xuan Zhou (MSU GRA 2009–2011)

### **Visiting Scholars/Students Hosted**

Yingxia Pu (Nanjing University, 2018); Feifei Chen (Renmin University of China, 2018); Wanxu Chen (China University of Geosciences, 2017–2019); Kun Li (Fudan University, 2017); Myrzagul Mamadiarova (International University of Kyrgyzstan, 2017); Feng Xu (China University of Geosciences, 2016–2018)

### **PROFESSIONAL SERVICE (selected)**

#### **Disciplinary Service**

Deputy Editor, *Demography* 2016–2019

Editorial Board member, *Spatial Demography* 2012–present

Grant panelist/reviewer for

NSF: Smart & Connected Communities (2018), Sociology program (2018), Engineering Research Centers program (2015), Methodology, Measurement, and Statistics program (2014), Geography and Spatial Sciences program (2013)

NIH: 10 ZRG1 RPHB-R (2018), 01 ZAG1 ZIJ-5 (2017), ZRG1 PSE-C 04 (2016), Social Science and Population Studies B (2015)

NASA: Postdoctoral Program (2016)

European Research Council (ERC): Advanced Grant (2017)

Review project reports for

*USDA Forest Service* (2013)

Review manuscripts for journals

*American Journal of Agricultural Economics*; *American Journal of Public Health*; *American Journal of Preventive Medicine*; *Annals of Operations Research*; *Annals of Regional Science*; *Applied Ecology and Environmental Research*; *Applied Spatial Analysis and Policy*; *BMC Public Health*; *Bulletin of*

*Geography, Socio-economic Series; Computers, Environment and Urban Systems; Demographic Research; Demography; Ecological Economics; Ecological Processes; Economic Papers; Environment and Planning A; Environmental Monitoring and Assessment; Geographical Analysis; Growth and Change; International Journal of Digital Earth; International Journal of Geographical Information Science; Jahrbuch für Regionalwissenschaft (Review of Regional Research); International Migration Review; Journal of Appalachian Studies; Journal of Environmental Planning and Management; Journal of Geographical Systems; Journal of Healthcare Informatics Research; Journal of Maps; Journal of Regional Analysis and Policy; Journal of Transport and Land Use; Journal of Urban Technology; Land; Landscape and Urban Planning; Mathematical Population Studies: An International Journal of Mathematical Demography; Papers in Regional Science; Population and Environment; Population Research and Policy Review; Population, Space and Place; Preventive Medicine; Review of Regional Studies; Regional Studies; Rural Sociology; Social Forces; Social Science and Medicine; Social Science Research; Sociological Inquiry; Spatial Demography; Scientific Reports; Sustainability; The Rangeland Journal; Theory, Culture & Society; Transport Policy; Transportation Research Part A: Policy and Practice; Transportation Research Record; Urban Studies*

Article Editor, *SAGE Open* (2014)

Review books for publisher: *Routledge* (2013)

Invited Participant, Towards Scenarios of U.S. Demographic Change, the Scenarios and Interpretive Science Coordinating Group, U.S. Global Change Research Program, 2014

Population Association of America

Chair, 2018 Program Subcommittee on Population, Environment, and Development

Session Organizer, 2018, 2017; Session Chair, 2018, 2017; Session Discussant, 2017, 2010

Rural Sociology Society: Panelist, 2016; Session Chair, 2009

Southern Demographic Association: Member, Walter E. Terrie Award Committee, 2009, 2010, 2012

### **University Service at Penn State**

Member, Steering Committee, Social Science Research Institute, 2017–

Member, Steering Committee, Institute for CyberScience, 2017–

At-Large Representative, Internal Advisory Board, Population Research Institute, 2016–

Co-Organizer, the Innovative Methods Working Group, Population Research Institute, 2016–

Member, Advisory Board, Graduate Program in Demography, 2016–

Delegate of Population Research Institute and Social Science Research Institute to the University Consortium for Geographic Information Science (UCGIS), 2015–

Member, The Scientific Advisory Committee for the Community Sciences and Health Outcomes Shared Resources, Penn State Cancer Institute, 2016–2018

### **Departmental Service**

*PSU Department of Agricultural Economics, Sociology, and Education*

Member, Promotion and Tenure Committee, 2016–2017, 2017–2020

Member, Faculty Search Committee, 2015–2016, 2017–2018

Member, Honors and Awards Committee, 2015–2016, 2016–2017

Member, Rural Sociology Graduate Program Committee, 2015–2016

*SDSU Department of Sociology and Rural Studies*

Member, Promotion and Tenure Committee, 2014–2015

*MSU Department of Sociology*

Coordinator, Computational and Spatial Analysis Laboratory, 2009–2014

Chair, Rural Sociology and Community Preliminary Examination Committee, 2009–2014