

CURRICULUM VITAE

Dajun Dai

Professor

Department of Geosciences, College of Arts & Sciences, Georgia State University

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A) EDUCATION

- 2007 Ph.D.** Environmental Resources and Policy, Southern Illinois University Carbondale
Dissertation: “Exploring the computational and implementation characteristics of an improved genetic algorithm for cluster detection”.
- 2001 M.S.** Center for Environmental Sciences, Peking University, China
Thesis: “Strategic environmental assessment for industrial structure adjustment”
- 1997 B.E.** Department of Environmental Sciences, Jilin University, China

B) PROFESSIONAL CREDENTIALS

Professor of Geosciences, Georgia State University (2021-present)
Jointly Appointed, School of Public Health, GSU (2013-present)
Affiliated faculty member, Urban Studies Institute, GSU (2017-present)
Affiliated faculty member, Georgia Health Policy Center, GSU (2019-present)
Affiliated faculty member, Emory Center for Injury Control, Emory University (2010-present)
Associate Professor of Geosciences, Georgia State University (2015-2021)
Assistant Professor of Geosciences, Georgia State University (2009-2015)
Visiting Assistant Professor of Geography, Northern Illinois University (2008-2009)

C) SCHOLARSHIP AND PROFESSIONAL DEVELOPMENT

2021 Nominated (not ultimately awarded) for Outstanding Senior Faculty Award within the College of Arts and Sciences at Georgia State University.

1. Peer-Reviewed Journal Publications [^{*}=student co-author; indicates Social Science Citation Index (SSCI) or Science Citation Index (SCI) journals]

1. **2020. Dai, D.**, Wang, R.^{*} Space-time surveillance of negative emotions after consecutive terrorist attacks in London. *International Journal of Environmental Research and Public Health* 17, 4000. <https://doi.org/10.3390/ijerph17114000>.
2. **2019. Dai, D.**, Neal, F.B.^{*}, Diem, J., Deocampo, D.M., Stauber, C., Dignam, T.A. Confluent impact of housing and geology on indoor radon concentrations in Atlanta, Georgia, United States. *Science of the Total Environment*, 668: 500-511. DOI: [10.1016/j.scitotenv.2019.02.257](https://doi.org/10.1016/j.scitotenv.2019.02.257).
3. **2018.** Stauber, C., Adams, E., Rothenberg, R., **Dai, D.**, Luo, R., Weaver, S.R., Prasad, A., Kano, M. Measuring the impact of environment on the health of large cities. *International*

Journal of Environmental Research and Public Health. 15(6), 1216; DOI: [10.3390/ijerph15061216](https://doi.org/10.3390/ijerph15061216).

4. **2018.** Jelks, N.O.* , Hawthorne, T.L., **Dai, D.**, Fuller, C.H., and Stauber, C. Mapping the hidden hazards: spatial data collection of street-level environmental stressors in a degraded urban watershed. *International Journal of Environmental Research and Public Health*, DOI: [10.3390/ijerph15040825](https://doi.org/10.3390/ijerph15040825).
5. **2018.** Davarpanah, A*., Babaie, H.A., and **Dai, D.** Spatial autocorrelation of Neogene-Quaternary lava along the Snake River Plain, Idaho, USA. *Earth Science Informatics*, 11(1): 59-75. DOI: <https://doi.org/10.1007/s12145-017-0315-5>.
6. **2018.** Chen, X.* , Huang, L., **Dai, D.**, and Jin, K. Hotspots of road traffic crashes in a redeveloping area of Shanghai. *International Journal of Injury Control and Safety Promotion*, DOI: <https://doi.org/10.1080/17457300.2018.1431938>.
7. **2017.** Wang, P., Lin, X.* , and **Dai, D (corresponding author)**. Spatiotemporal agglomeration of real-estate industry in Guangzhou, China. *Sustainability*, 9, 1445; DOI: <https://doi.org/10.3390/su9081445>.
8. **2017.** **Dai, D.**, Rothenberg, R., Luo, R., Weaver, S., and Stauber, C. Improvement of geographic disparities: amelioration or displacement? *Journal of Urban Health*, 94(3): 417-428. DOI: [10.1007/s11524-017-0151-4](https://doi.org/10.1007/s11524-017-0151-4).
9. **2017.** Rothenberg, R., **Dai, D.**, Adams, M.A., Heath, J.W. The Human Immunodeficiency Virus endemic: maintaining disease transmission in at-risk urban areas. *Sexually Transmitted Diseases*, 44(2): 71-78. DOI: [10.1097/OLQ.0000000000000561](https://doi.org/10.1097/OLQ.0000000000000561).
10. **2017.** Stauber, C., **Dai, D.**, Chan, S*., Diem, J., Weaver, S., Rothenberg, R. A pilot study to examine exposure to residential radon in under sampled census tracts of DeKalb County, Georgia, in 2015. *International Journal of Environmental Research and Public Health*, 14, 332; DOI: [10.3390/ijerph14030332](https://doi.org/10.3390/ijerph14030332).
11. **2017.** Berens, A.S*., Diem, J. Stauber, C., **Dai, D.**, Foster, S., and Rothenberg, R. The use of gamma-survey measurements to better understand radon potential in urban areas. *Science of the Total Environment*, (607-608): 888-899. DOI: [10.1016/j.scitotenv.2017.07.022](https://doi.org/10.1016/j.scitotenv.2017.07.022).
12. **2016.** **Dai, D.**, Jaworski D*. Influence of built environment on pedestrian crashes: A network-based GIS analysis. *Applied Geography*, 73: 53-61. DOI: <https://doi.org/10.1016/j.apgeog.2016.06.005>.
13. **2016.** Weimann, A.* , **Dai, D.**, Oni, T. A cross-sectional and spatial analysis of the prevalence of multimorbidity and its association with socioeconomic disadvantage in South Africa: A comparison between 2008 and 2012. *Social Science and Medicine*, 163: 144-156. DOI: [10.1016/j.socscimed.2016.06.055](https://doi.org/10.1016/j.socscimed.2016.06.055).

14. **2016.** Meyer BK.*, Vance RK., Bishop GA., **Dai D.** Shoreline dynamics and environmental change under the modern marine transgression: St. Catherines Island, Georgia, USA. *Environmental Earth Sciences*, 75:36. DOI: <https://doi.org/10.1007/s12665-015-4780-1>.
15. **2015.** Zhu M., Li J., Li Z., Luo W., **Dai D.**, Weaver SR., Stauber C., Luo R., Fu H. Mortality rates and the causes of death related to diabetes mellitus in Shanghai Songjiang District: an 11-year retrospective analysis of death certificates. *BMC Endocrine Disorders*, 15:45. DOI: [10.1186/s12902-015-0042-1](https://doi.org/10.1186/s12902-015-0042-1).
16. **2015.** Rothenberg R., Weaver, S., Stauber C., **Dai D.**, Prasad A., Kano M. Urban health indicators and indices: Current status. *BMC Public Health*, 15: 494. DOI: [10.1186/s12889-015-1827-x](https://doi.org/10.1186/s12889-015-1827-x).
17. **2014.** Rothenberg R., Weaver, S., **Dai D.**, Stauber C., Prasad A., Kano M. A flexible urban health index for small area disparities. *Journal of Urban Health*, 91(5): 823-825. DOI: [10.1007/s11524-014-9867-6](https://doi.org/10.1007/s11524-014-9867-6).
18. **2013.** **Dai D.**, Zhang Y.*, Lynch CA, Miller T., Shakir, M. Childhood drowning in Georgia: a Geographic Information Systems analysis. *Applied Geography*, 37: 11-22. <https://doi.org/10.1016/j.apgeog.2012.10.006>.
19. **2012.** **Dai D.**, Chen Y-S, Chen P-S, Chen Y-L. Case cluster shifting and contaminant source as determinants of melioidosis in Taiwan. *Tropical Medicine & International Health*, 17(8): 1005-1013. DOI: [10.1111/j.1365-3156.2012.03036.x](https://doi.org/10.1111/j.1365-3156.2012.03036.x).
20. **2012.** **Dai D.** Identifying clusters and risk factors of injuries in pedestrian-vehicle crashes in a GIS environment. *Journal of Transport Geography*, 24: 206-214. DOI: <https://doi.org/10.1016/j.jtrangeo.2012.02.005>.
21. **2011.** **Dai D.** Racial/ethnic and socioeconomic disparities in urban green space accessibility: where to intervene? *Landscape and Urban Planning*, 102(4): 234-244. DOI: <https://doi.org/10.1016/j.landurbplan.2011.05.002>.
22. **2011.** **Dai D.**, Wang F. Geographic disparities in accessibility to food stores in Southwest Mississippi. *Environment and Planning B, Planning and Design*, 38(4): 659 - 677. DOI: <https://doi.org/10.1068/b36149>.
23. **2011.** Lynch, CA, Houry, DE, **Dai, D.** Wright, DW. Evidence-based community consultation for traumatic brain injury. *Academic Emergency Medicine*, 18(9): 972-976. DOI: [10.1111/j.1553-2712.2011.01153.x](https://doi.org/10.1111/j.1553-2712.2011.01153.x).
24. **2010.** **Dai D.** Black residential segregation, disparities in spatial access to health care facilities, and late-stage breast cancer diagnosis in metropolitan Detroit. *Health and Place*, 16(5): 1038-1052. DOI: <https://doi.org/10.1016/j.healthplace.2010.06.012>.

25. **2010. Dai D**, Taquechel ET*, Steward J, Strasser S. The impact of built environment on pedestrian crashes and the identification of crash clusters on an urban university campus. *Western Journal of Emergency Medicine*. 11(3): 294-301.
26. **2010.** Oyana TJ, **Dai D**. Automatic cluster identification for environmental applications using the self-organizing maps and a new genetic algorithm. *Geocarto International*. 25(1): 53-69. DOI: <https://doi.org/10.1080/10106040802711687>.
27. **2008. Dai D**, Oyana TJ. Spatial variations in the incidence of breast cancer and potential risks associated with soil dioxin contamination in Midland, Saginaw, and Bay Counties, Michigan, USA. *Environmental Health*. 7:49. DOI: [10.1186/1476-069X-7-49](https://doi.org/10.1186/1476-069X-7-49).
28. **2006.** Oyana TJ, **Dai D**, Scott KE. Spatiotemporal distributions of reported cases of the Avian Influenza H5N1 (bird flu) in Southern China in early 2004. *Avian Disease*, 50(4):508-515. DOI: [10.1637/7597-040506.1](https://doi.org/10.1637/7597-040506.1).

2. Books, book chapters, essays, technical reports, and articles

1. **2021.** United States Geological Survey (prepared by Duong, L*, Rogers, K*, Hidalgo, P. **Dai, D. (Corresponding Author)**), Technical report: Geologic mapping and 3D visualization of Northern Half of Chamblee Quadrangle, Georgia.
2. **2021.** Duong, L*, Rogers, K*, Hidalgo, P. **Dai, D. (Corresponding Author)**. Geologic map of the north half of the Chamblee 7.5' Quadrangle, Atlanta, Georgia.
3. **2019.** Rothenberg, R., Stauber C., **Dai, D.**, Nijman, J. Urban Health Indicators: the role of data disparities. *Encyclopedia of Environmental Health (Second Edition)*, pp. 283-285. Elsevier, ISBN: 978-0-444-63952-3. DOI: <https://doi.org/10.1016/B978-0-12-409548-9.11240-0>.
4. **2016.** The World Health Organization (prepared by Stauber, C., Weaver, S., **Dai, D.**, Luo, R., and Rothenberg, R.), Comparison of Cities using the Urban Health Index: An Analysis of Demographic and Health Survey Data from 2003-2013. World Health Organization. ISBN 978-92-4-151607-5. <https://apps.who.int/iris/handle/10665/206848>.
5. **2014.** Weaver, S., **Dai, D.**, Stauber C., Luo, R., Rothenberg R. *The Urban Health Index: A handbook for its calculation and use*. Kobe (Japan): World Health Organization, ISBN 978-92-4-150780-6.
6. **2012.** **Dai D**. An integrated approach to designate the shortage areas for mammography access in a GIS environment. In A. Palmetti & R. Roux (Eds), *Mammography: Procedure, Results and Risks*, Hauppauge, NY: Nova Science Publishers. ISBN: 978-1-61470-589-5.
7. **2011.** Oyana TJ, McGoy, SL, **Dai D**. Geographical and epidemiological aspects of highly pathogenic Avian Influenza H5N1 and public health implications in China

between 1997 and 2009. In S.K. Majumdar, F.J. Brenner, J.E. Huffman, R. McLean, A. Panah, P. Pietrobon, and S. Keeler (eds.), *Pandemics Influenza Virus: Science, Surveillance, and Public Health*, Easton, Pennsylvania: Pennsylvania Academic of Science (PAS). ISBN: 0945809212.

3. Conference proceedings (*=student co-author)

1. **2013. Dai D, Zhang Y.*** Simulating fire spread in a community using an agent-based model. In Proceedings of the 12th International Conference on GeoComputation, Wuhan, China.
2. **2009. Dai D, Taquechel ET.*** Assessing pedestrian safety hazards around Georgia State University using Geographic Information Systems (GIS). Public Health Reports. Available at <http://www.publichealthreports.org/EOH-abstracts/TOC.cfm>.
3. **2007. Dai D, Oyana TJ.** A genetic algorithm for spatiotemporal cluster detection and analysis. In Proceedings of the 9th International Conference on GeoComputation, NUI Maynooth, Ireland.
4. **2006. Dai D, Oyana TJ.** An improved genetic algorithm for spatial clustering. In Proceedings of the 18th IEEE International Conference on Tools with Artificial Intelligence (ICTAI'06) pp. 371-380, Arlington, Virginia.

4. Research Grants

a. EXTERNAL GRANTS

- 2021.** (PI) United States Geological Survey, “Geological mapping and 3D visualization of Southern Half of Chamblee Quadrangle, Georgia”, \$49,943, 8/16/2021 – 8/15/2022.
- 2020.** (PI) Robert Wood Johnson Foundation, “REMOVE: a community-based approach to advance environmental justice and health”, \$359,000, 9/15/2020 – 9/14/2023.
- 2020.** (PI) United States Geological Survey, “Geological mapping and 3D visualization of Northern Half of Chamblee Quadrangle, Georgia”, \$35,097, 8/2020 – 7/2021.
- 2020.** (Co-PI) National Science Foundation, “SitS: A Novel Large-Scale Radon Measurement Wireless Testbed for Spatio-Temporal Study of Radon in Surficial Soil”, \$1,198,002. 2021 – 2025.
- 2020.** (PI) Elmhurst College, Illinois, “Mapping race zones in Atlanta and Raleigh”, \$3,000, 6/2020 – 8/2020.
- 2019.** (Co-I) Literacy for All, “Mapping adult basic and adult secondary education: supply and demand in Georgia”, \$20,168, 3/2019 – 8/2019.

- 2018.** (Co-PI) Food Well Alliance of Atlanta, “Mapping Atlanta’s Local Food Network”, \$36,624, 8/2018-12/2018.
- 2017.** (Co-PI) Food Well Alliance of Atlanta, “Mapping Atlanta’s Local Food Network”, \$12,400, 8/2017-5/2018.
- 2016.** (PI) Association of American Geographers/National Science Foundation, “Geography for economic development in regionalization and globalization to be presented in International Geographic Union Conference in Beijing”, \$1,500, 2/2016-8/2016.
- 2014.** (PI/Project Lead) National Institutes of Health, “Racial/ethnic disparities in radon screening and exposure in DeKalb County”, \$147,960, 9/2014-9/2016.
- 2014.** (co-I) National Institutes of Health, “Developing an urban thermal vulnerability index for Atlanta”, \$147,922, 9/2014-9/2016.
- 2014.** (PI) World Health Organization, “Urban Health Index Megacity Comparison”, \$50,000, 7/2014 – 5/2015 (I am one of the two PIs in a Multi-PI model).
- 2013.** (co-I) National Institutes of Health, “Delaying underage drinking and HIV risks”, \$275,000, 9/2013 – 8/2015.
- 2013.** (co-PI) World Health Organization, “Development of an Urban Health Index Toolkit”, \$25,000, 12/2013 – 6/2014.
- 2012.** (Advisor of a student PI) Emory Center for Injury Control, “Influence of the built environment on pedestrian-vehicle crashes in DeKalb County”, \$1,000, 6-8/2012.
- 2012.** (Consultant). National Institutes of Health, “Empirically testing network sampling strategies in unbounded risk populations”, \$2,283,087, 4/2012 – 3/2016.
- 2011.** (co-PI) World Health Organization, “Development of a prototype of a global urban health index”, \$10,000, 8/2011-7/2012.
- 2011.** (co-I) National Institutes of Health, “Establish Environmental Health Disparities Core in Center of Excellence”, \$524,487, 9/2011-8/2013.
- 2011.** (co-I) Emory Center for Injury Control, “The social determinants and clustering of drowning in Georgia”, \$5,000, 1/2011-1/2012.
- 2010.** (co-PI) Georgia Department of Transportation, “A web-based petrologic and geochemical information system of aggregate sources”, \$74,982. 6/2010 – 6/2012.
- 2010.** (Research Core Member), National Institutes of Health, “P20: Center of Excellence on Health Disparities”, \$6.7 million, 12/2011-11/2015.

2008. (co-PI) US Department of Homeland Security, “Development of undergraduate interdisciplinary curriculum for Homeland Security STEM field”, \$200,000.

b. INTERNAL GRANTS

Funded

2021. (PI/MPI) AU/GSU Seed Award Program for Collaborative Clinical & Translational Research, “Geographical Disparities in Healthcare Access and Living Conditions on Mental and Cardiovascular Health: Longitudinal Analyses in the Central Savannah River Area”, \$50,000, 7/1/2021 – 6/30/2022.

2019. (PI) Georgia Health Policy Center, “Mapping Sickle Cell Disease in Georgia”, \$5,200, 2/2019 – 10/2019.

2019. (co-I) GSU School of Public Health, “Clarkston Social Determinants Map Project”, \$10,000, 5/2019 – 9/2019.

2017. (co-PI) Comparative Urban Research – Partnership Initiation Grant, “Advance the tripartite collaboration: GSU, University of Cape Town, and Sun Yat-sen University”, \$10,000, 3/2017-12/2017. Wrote the proposal, the official PI is Richard Rothenberg.

2014. (co-I) Comparative Urban Research – Partnership Initiation Grant, “Establish a tripartite collaboration between Georgia State, Hong Kong Baptist University and the University of Cape Town, South Africa”, \$10,000, 12/2014 – 6/2015.

2014. (co-I) 2014 CDC-GSU Seed Grant, “Individual and community health in low income neighborhoods: An evaluation of the Atlanta’s Beltline Project”, \$100,000, 9/2014 – 8/2016.

2014. (PI) GSU Office of International Initiatives (OII) Faculty International Partnership Engagement (FIPE), “Mapping Social and Environment Disparities in Cities: An Integrated Field GIS in Shanghai”, \$2,500, 4/2014 – 12/2014.

2013. (co-I) Developing External Educational Partnership (DEEP) at GSU College of Arts and Science, “GSU-HKBU Connections in Geosciences: Building Bridges in Urban Geography, Geospatial Science, and Earth Systems”, \$7,380, 7/2013 – 6/2015.

2013. (co-I) Cities Initiative at Georgia State University, “Planning grant for urban health indicators and indices”, \$63,000, 7/2013 – 6/2014.

2012. (co-I) Cities Initiative at Georgia State University, “Transnational comparison of urban health indicators and indices”, \$100,000, 9/2012-6/2013.

- 2011.** (PI) Georgia State University Injury and Violence Seed Program, “Investigating child pedestrian crashes in Fulton and DeKalb Counties, Georgia”, \$10,951, 7/2011-6/2012.
- 2011.** (PI) Faculty development travel grant to attend and present a paper at a conference. \$800 Grant awarded by the GSU OUF.
- 2011.** (co-I) GSU 2011 STEM II Initiative, “Enhancing geospatial thinking through engaged problem solving and real-world applications of geographic information systems”, \$9,215, 9/2011-8/2012.
- 2010.** (PI) GSU Research Initiation Grant, “Spatial variation in children with elevated blood lead levels around Peachtree DeKalb Airport, DeKalb, Georgia”, \$10,000, 7/2010-6/2011.
- 2010.** (PI) Faculty development travel grant to attend and present a paper at a conference. \$650 Grant awarded by the GSU OUF.

D) INSTRUCTION, INCLUDING ADVISING

- Introduction to Human Geography
- Introductory Mapping and GIS
- Geographic Information Systems
- Geographic Information Systems (online)
- Advanced Geographic Information Systems
- Advanced Geographic Information Systems (online)
- Urban Health GIS/Urban GIS
- GIS Programming
- GIS Programming (online)
- Study Abroad: Urban Health GIS in Shanghai (Summer 2015)

E) SERVICE

Editorial Board

2019-present Editorial Board Member, *Oxford Academic – Health Education Research*

2013-present Editorial Board Member, *Elsevier - Journal of Acute Disease*

Administrative Contributions to Professional Associations

2020-present Health-GIS Committee Member, *Chinese Professional in Geographic Information Science (CPGIS)*

Manuscript Review

1. **2021.** *Annals of GIS* (June 2021)
2. **2021.** *Environmental Science & Technology* (January 2021)
3. **2020.** *Annals of Association of American Geographers* (August 2020)
4. **2020.** *American Journal of Preventive Medicine* (June 2020)

5. **2020.** *American Journal of Preventive Medicine* (April 2020)
6. **2020.** *Health and Place* (March 2020)
7. **2019.** *Annals of GIS* (October 2019)
8. **2019.** *Health Education Research* (July 2019)
9. **2019.** *Health Education Research* (May 2019)
10. **2018.** *Book Chapter (Geo)Spatial Technologies for Urban Health* (August 2018).
11. **2018.** *Computers, Environment and Urban Systems* (May 2018)
12. **2017.** *Annals of Epidemiology* (August 2017)
13. **2017.** *BioMed Research International* (January 2017)
14. **2017.** *Plos One* (January 2017)
15. **2016.** *Landscape & Urban Planning* (November 2016)
16. **2016.** *Applied Geography* (October 2016)
17. **2016.** *Health and Place* (February 2016)
18. **2015.** *Health and Place* (September 2015)
19. **2015.** *Computers, Environment & Urban Systems* (June 2015)
20. **2015.** *Health and Place* (February 2015)
21. **2014.** *Geographic Review* (November 2014)
22. **2014.** *Annals of Epidemiology* (March 2014)
23. **2013.** *Habitat International* (February 2013)
24. **2013.** *Journal of Transport Geography* (April 2013)
25. **2013.** *Applied Geography* (April 2013)
26. **2013.** *Annals of Epidemiology* (October 2013)
27. **2013.** *Landscape & Urban Planning* (September 2013)
28. **2013.** *Urban Geography* (October 2013)
29. **2012.** *Health & Place* (January 2012)
30. **2012.** *Applied Geography* (August 2012)
31. **2012.** *Landscape & Urban Planning* (October 2012)
32. **2012.** *Journal of Rural Social Sciences* (March 2012)
33. **2012.** *American Journal of Epidemiology* (April 2012)
34. **2012.** *Applied Geography* (March 2012)
35. **2012.** *International Journal of Health Geographics* (July 2012)
36. **2012.** *International Journal of Health Geographics* (September 2012)
37. **2012.** *Journal of Transport Geography* (September 2012)
38. **2012.** *Western Journal of Emergency Medicine* (December 2012)
39. **2011.** *Annals of Epidemiology* (June 2010)
40. **2011.** *Annals of Epidemiology* (November 2010)
41. **2011.** *Health & Place* (December 2011)
42. **2011.** *Health & Place* (April 2011)
43. **2011.** *International Journal of Health Geographics* (February 2011)
44. **2011.** *Int'l Journal of Applied Geospatial Research* (February 2011)
45. **2011.** *The Canadian Geographer* (June 2011)
46. **2011.** *Advance Tropical Medicine & Public Health Int'l* (June 2011)
47. **2011.** *Annals of GIS* (August 2010)
48. **2011.** *Landscape and Urban Planning* (October 2011)
49. **2011.** *Landscape and Urban Planning* (September 2011)
50. **2011.** *Int'al Journal of Environmental Research & Public Health* (October 2011)

51. **2011.** *American Journal of Epidemiology* (December 2011)
52. **2011.** *American Journal of Epidemiology* (November 2011)
53. **2010.** *Annals of Epidemiology* (March 2010)
54. **2010.** *Journal of Urban Health* (October 2010)
55. **2010.** *Health & Place* (October 2010)